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# STUDIES

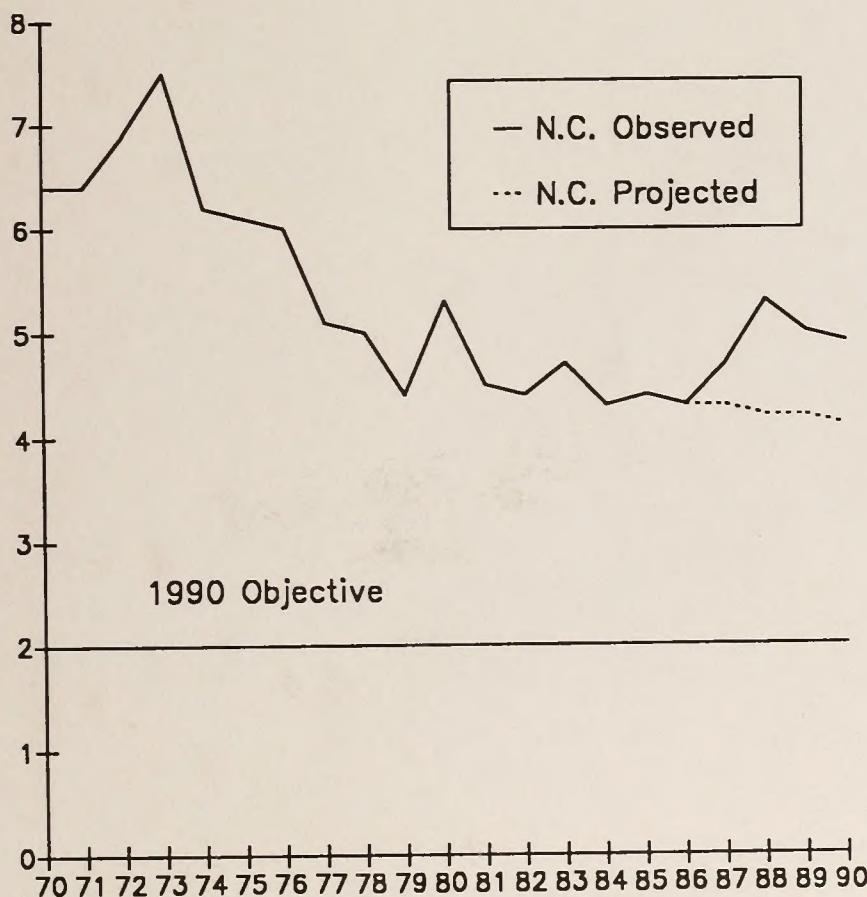
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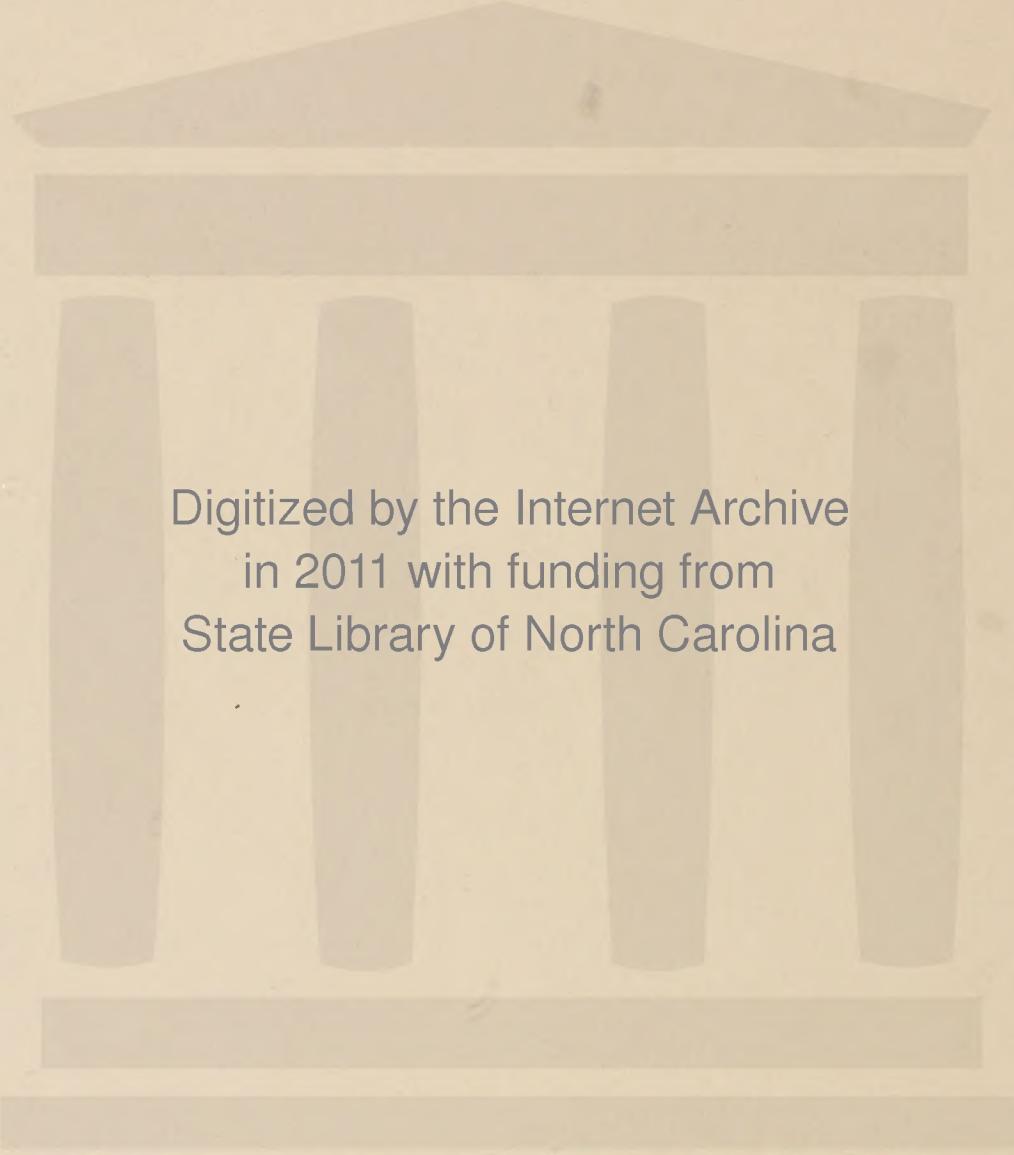
No. 65

June 1992

## 1990 HEALTH OBJECTIVES FOR THE NATION: THE NORTH CAROLINA ASSESSMENT

by  
Kathryn P. Blue





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## HIGHLIGHTS

Of the 30 national objectives addressed in this report, North Carolina met only five:

- o *Virtually all women who give birth should have appropriately attended, safe delivery, provided in ways acceptable to them and their families:* Since 1985, only 0.2 percent of North Carolina mothers have been attended at birth by an attendant other than a physician or a midwife. No data are available on the latter part of the objective.
- o *Virtually all newborns will be provided neonatal screening for metabolic disorders:* Since 1988, all children delivered in N.C.'s hospitals have been tested for metabolic disorders, and others are tested before a birth certificate is issued.
- o *At least 95 percent of children attending licensed day care facilities and kindergarten through 12th grade should be fully immunized:* In 1990, nearly 98 percent of all children admitted to kindergarten or first grade were fully immunized. North Carolina met this objective despite more stringent immunization requirements implemented in 1987.
- o *Deaths from other (non-motor-vehicle) accidents directly attributable to alcohol should be reduced to five per 100,000 population per year:* Although 1990 data are not available from the Medical Examiner file, it appears that North Carolina met this objective. Data from 1986 through 1989 show an increase in death rates due to alcohol-related unintentional injuries, but North Carolina remains below the national objective.
- o *The cirrhosis mortality rate should be reduced to 12 per 100,000 per year:* Although North Carolina's cirrhosis death rate rose from 1985 through 1989, it dipped in 1990 to remain below the objective for the nation. The U.S. rate has dropped steadily since 1973 to 10.2, below the 1990 rate of 10.8 for North Carolina.

The U.S. also either met or is projected to meet five objectives, although for some objectives there was not reliable baseline data for the United States. For example, although North Carolina has data on abortions performed during the second trimester, the U.S. has no comparable data. Some states do not collect abortion data, therefore United States abortion data are incomplete.

For some objectives, North Carolina has actually lost ground; that is, North Carolina not only failed to meet the objective, but its citizens have been worsening in health status. The following trends are actually headed in the wrong direction:

- o *Fertility rates for women aged 15, aged 16, and aged 17 have all increased since 1988.* In addition, trends show a general rise in fertility rates for girls under age 15.
- o *1990 showed a sharp rise in maternal mortality.* Both whites and nonwhites experienced higher maternal mortality rates.
- o *The primary and secondary syphilis case rate has shown a dramatic increase since 1987.* The U.S. follows the same trend, but at a much lower case rate.

- o The drug-related death rate has risen steadily since 1980, when North Carolina experienced the national objective of 2.0 deaths per 100,000 population. Although the U.S. death rate is considerably higher, it shows similar trends.
  - o The state's homicide death rate for black males aged 15-24 was at or below the national objective of 60.0 through 1989. In 1990, however, it rose to 71.8 per 100,000 population.
  - o Child abuse and neglect reports and confirmed cases have grown every year, except one, since these data have been collected. The national objective for 1990 called for child abuse cases to be reduced by 25 percent between 1980 and 1990.
  - o The suicide rate for North Carolinians aged 15 through 24 rose in 1989 and 1990 to surpass that of the nation. In 1990, nearly 14 out of every 100,000 people aged 15 through 24 committed suicide.

Based on 1982-86 data, the following objectives were expected to be met or surpassed by North Carolina, but were not: black homicide rate among males aged 15 through 24; suicide rate among people aged 15 through 24; neonatal death rate; and primary and secondary syphilis case rates.

Declines in the percentage of second trimester abortions, infant and neonatal mortality, motor vehicle death rates for total and children under age 15, and the drowning death rate are encouraging. However, based upon the few national goals reached by either the United States or North Carolina, it appears that more realistic goals need to be set. North Carolina is in the process of setting objectives for the year 2000, which hopefully will aid policymakers and planners, as well as those on the front line who must implement strategies, to reach these goals.

## INTRODUCTION

Following the 1979 publication of *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention*,<sup>1</sup> a set of 226 national health objectives was published in the 1980 report, *Promoting Health, Preventing Disease: Objectives for the Nation*.<sup>2</sup> These objectives were established to set a course towards improving health status and reducing health risks. The objectives addressed 1990 targets not only for measurable health status and risk indicators, but also for some areas for which there was no established baseline data available. Crossing 15 health-priority areas, the objectives link mortality, morbidity, preventive interventions, and health-related behaviors.

The 1986 Public Health Service report, *The 1990 Health Objectives for the Nation: A Midcourse Review*,<sup>3</sup> provided an update on the national objectives, commentary on the goals, and an assessment of what would be needed to achieve the 1990 goals. In 1988, the State Center for Health and Environmental Statistics published a similar report, *1990 Health Objectives for the Nation: The North Carolina Course*.<sup>4</sup> This report addressed the 30 objectives for which quantifiable health data were available.

In the present report, *1990 Health Objectives for the Nation: The North Carolina Assessment*, the same objectives addressed in the 1988 North Carolina report are examined. The format for each objective is as follows: the original 1990 objective, explanatory notes about the calculation or collection of the data, a summary of the findings, related national Year 2000 objectives, and the source of the data. In addition to actual observed data, the projection line used to predict whether N.C. would achieve a particular goal is shown. Whenever possible, data from the U.S. are included. These data show that in many areas, North Carolina and the United States still have a long way to go towards achieving the goals set in 1979. It is hoped that this report will aid policymakers, health planners and other health professionals in making informed decisions.

## TECHNICAL NOTES

### Resident Data

All North Carolina data shown in this report are for residents of the state, except data obtained from the Office of Chief Medical Examiner and from the Newborn Screening Program, which reflect events occurring in North Carolina. The denominators for population-based rates are midyear population estimates obtained from the Office of State Planning.

### Crude Death Rates

The 1990 national mortality objectives were developed on the basis of crude (unadjusted) rates rather than rates adjusted for age, race or other factors. In contrast, the national objectives for the year 2000 use 1940 age-adjusted death rates<sup>5</sup> (1970 age-adjusted rates are available for cancer sites).

## **International Classification of Diseases (ICD)**

The causes of death examined in this report are defined in terms of codes from the Eighth and Ninth revisions of the *International Classification of Diseases*.<sup>67</sup> The Ninth revision was implemented in 1979. Causes examined in this report represent the underlying cause of death.

## **Projections to 1990**

The North Carolina projections depicted in this report are based on fitting a linear regression model to the logarithm of the observed rates, percentages or numbers observed during 1982-86. Logarithms are used because they follow a constant proportional change rather than a constant arithmetical change. These log-linear projections assume that the lower a value has become, the more difficult it will be to achieve further reductions. However, these projections are only extrapolations of the observed trends and could be substantially inaccurate if 1987 - 1990 trends depart very much from those of the recent past. The projections are based on data for 1982 - 1986, the latest five years available in 1988, when the previous report was published. It was felt that 1987 - 1990 trends would correspond more closely to those of the last five years than those of the longer-term past. Again, the projections were only "statistical estimates" of the values expected for the period 1987 through 1990, and in some cases they were grossly inaccurate.

# **REVIEW OF THE PREVENTIVE HEALTH SERVICES**

## **IN THE CALIFORNIA STATE BUDGET**

and information to example along the state budget, as well as the proposed 2007-08 budget, to determine the system's cost of care for the uninsured population.

# **I. PREVENTIVE HEALTH SERVICES**

## **FAMILY PLANNING**

## **PREGNANCY AND INFANT HEALTH**

## **IMMUNIZATIONS**

## **SEXUALLY TRANSMITTED DISEASES**

California's preventive health services benefit families by reducing the risk of serious illnesses and saving money for the state.

California's preventive health services are currently facing a funding crisis. The state must take action now to ensure that families have access to the services they need to stay healthy.

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# FERTILITY RATES FOR GIRLS 14 YEARS OF AGE AND UNDER

## Objective

By 1990, there should be almost no unintended births to girls 14 years of age and under. (Note: The assumption is made that all births to this age group are unintended.)

## Explanatory Notes

For this report, the fertility rate is calculated as the number of resident live births to girls ages 14 or younger per 1,000 female population ages 10-14.

## Findings

In 1990, 402 live births occurred to girls aged 14 and younger. North Carolina did not meet the objective of zero births, so it is impossible for the U.S. have achieved this objective. In recent years, the rate of births to very young girls has risen instead of falling, so that the goal of zero seems implausible without major changes in attitudes and behaviors.

## Related National Objectives for the Year 2000

- o Reduce pregnancies among girls aged 17 and younger to no more than 50 per 1,000 adolescents.
- o Reduce to no more than 30 percent the proportion of all pregnancies that are unintended.
- o Reduce to no more than 40 percent the proportion of all pregnancies among black women that are unintended.
- o Reduce the proportion of adolescents who have engaged in sexual intercourse to no more than 15 percent by age 15 and no more than 40 percent by age 17.
- o Increase to at least 40 percent the proportion of ever sexually active adolescents ages 17 and younger who have abstained from sexual activity for the previous three months.
- o Increase to at least 90 percent the proportion of sexually active, unmarried people aged 19 and younger who use contraception, especially combined method contraception that both effectively prevents pregnancy and provides barrier protection against disease.
- o Increase the effectiveness with which family planning methods are used, as measured by a decrease to no more than five percent in the proportion of couples experiencing pregnancy despite use of a contraceptive method.
- o Increase to at least 85 percent the proportion of people aged 10 through 18 who have discussed human sexuality, including values surrounding sexuality, with their parents and /or have received information through other parentally endorsed source, such as youth, school, or religious programs.
- o Increase to 90 percent the proportion of pregnancy counselors who offer positive, accurate information about adoption to their unmarried patients with unintended pregnancies.
- o Increase to at least 60 percent the proportion of primary care providers who provide age-appropriate preconception care and counseling.

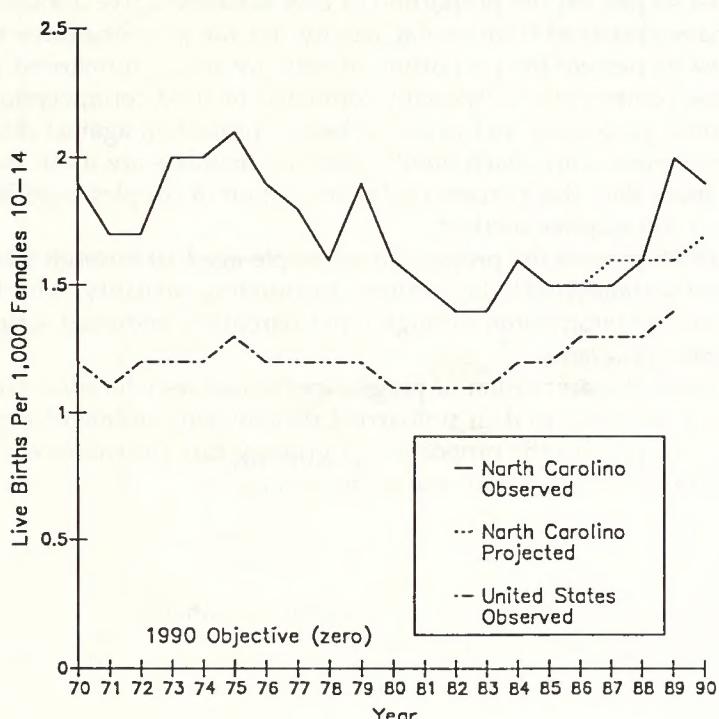
## Data Sources

North Carolina: State Center for Health and Environmental Statistics  
United States: National Center for Health Statistics

## FERTILITY RATES FOR GIRLS 14 YEARS OF AGE AND UNDER NORTH CAROLINA AND UNITED STATES, 1970 - 1990

Year	North Carolina	United States
1970	1.9	1.2
1971	1.7	1.1
1972	1.7	1.2
1973	2.0	1.2
1974	2.0	1.2
1975	2.1	1.3
1976	1.9	1.2
1977	1.8	1.2
1978	1.6	1.2
1979	1.9	1.2
1980	1.6	1.1
1981	1.5	1.1
1982	1.4	1.1
1983	1.4	1.1
1984	1.6	1.2
1985	1.5	1.2
1986	1.6	1.3
1987	1.5	1.3
1988	1.6	1.3
1989	2.0	1.4
1990	1.9	n.a.

FERTILITY RATES FOR GIRLS 14 YEARS OF AGE  
AND UNDER: N.C. AND U.S. 1970-1990  
N.C. PROJECTED 1987-1990



## FERTILITY RATE FOR GIRLS 15 YEARS OF AGE

### Objective

By 1990, the fertility rate for girls 15 years of age should be reduced to 10 per 1,000.

### Explanatory Notes

The fertility rate is calculated as the number of resident live births to girls aged 15 per 1,000 female population 15 years of age. N.C. population by single year of age is not available prior to 1980.

### Findings

The North Carolina fertility rate for girls aged 15 is consistently higher than the corresponding U.S. rate throughout the 1980s. Despite projections that the rate would level off, it continued to climb.

### Related National Objectives for the Year 2000

- o Reduce pregnancies among girls aged 17 and younger to no more than 50 per 1,000 adolescents.
- o Reduce pregnancies among black girls aged 15 through 19 to no more than 120 per 1,000 adolescents.
- o Reduce pregnancies among Hispanic girls aged 15 through 19 to no more than 105 per 1,000 adolescents.
- o Reduce to no more than 30 percent the proportion of all pregnancies that are unintended.
- o Reduce to no more than 40 percent the proportion of all pregnancies among black women that are unintended.
- o Reduce the proportion of adolescents who have engaged in sexual intercourse to no more than 15 percent by age 15 and no more than 40 percent by age 17.
- o Increase to at least 40 percent the proportion of ever sexually active adolescents aged 17 and younger who have abstained from sexual activity for the previous three months.
- o Increase to at least 90 percent the proportion of sexually active, unmarried people aged 19 and younger who use contraception, especially combined method contraception that both effectively prevents pregnancy and provides barrier protection against disease.
- o Increase the effectiveness with which family planning methods are used, as measured by a decrease to no more than five percent in the proportion of couples experiencing pregnancy despite use of a contraceptive method.
- o Increase to at least 85 percent the proportion of people aged 10 through 18 who have discussed human sexuality, including values surrounding sexuality, with their parents and/or have received information through other parentally endorsed source, such as youth, school, or religious programs.
- o Increase to 90 percent the proportion of pregnancy counselors who offer positive, accurate information about adoption to their unmarried patients with unintended pregnancies.
- o Increase to at least 60 percent the proportion of primary care providers who provide age-appropriate preconception care and counseling.

### Data Sources

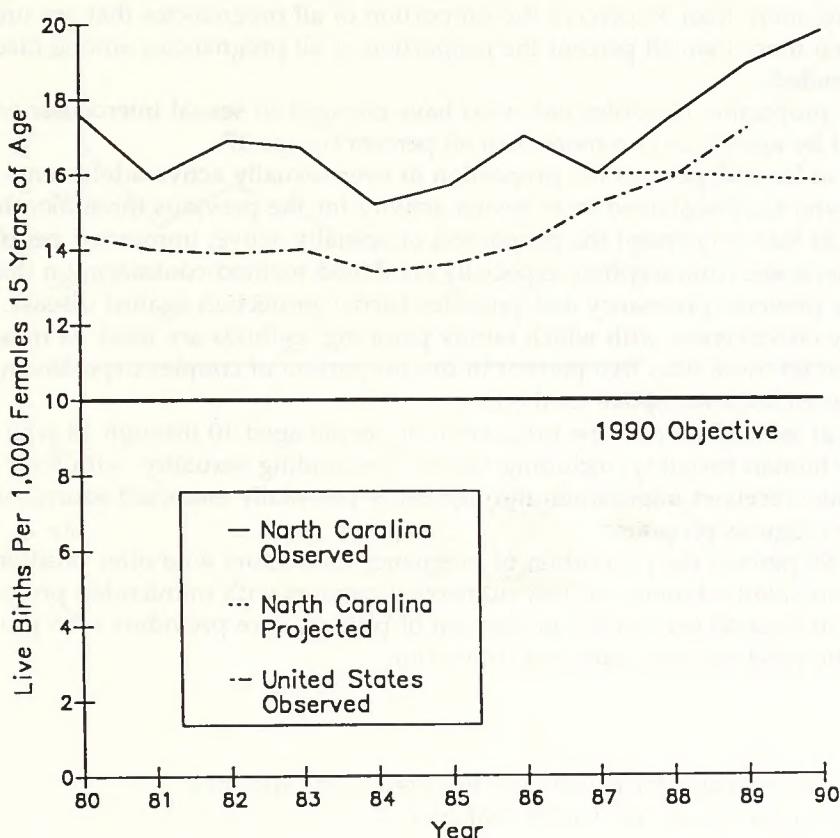
North Carolina: State Center for Health and Environmental Statistics

United States: National Center for Health Statistics

## FERTILITY RATES FOR GIRLS 15 YEARS OF AGE NORTH CAROLINA AND UNITED STATES, 1980 - 1990

Year	North Carolina	United States
1980	17.6	14.4
1981	15.9	14.0
1982	16.9	13.9
1983	16.7	14.0
1984	15.2	13.4
1985	15.7	13.6
1986	17.0	14.1
1987	16.0	15.2
1988	17.5	15.9
1989	18.9	17.2
1990	19.8	n.a.

## FERTILITY RATES FOR GIRLS 15 YEARS OF AGE NORTH CAROLINA AND UNITED STATES, 1980-1990 NORTH CAROLINA PROJECTED 1987-1990



## FERTILITY RATE FOR GIRLS 16 YEARS OF AGE

### Objective

By 1990, the fertility rate for girls 16 years of age should be reduced to 25 per 1,000.

### Explanatory Notes

The fertility rate is calculated as the number of resident live births to girls aged 16 per 1,000 female population 16 years of age. N.C. population by single year of age is not available prior to 1980.

### Findings

The North Carolina fertility rate for girls aged 16 has climbed dramatically since 1987. In 1988, the U.S. rate was slightly higher than N.C., but in all other years N.C. was higher. Projections for 1990 had indicated that N.C.'s rate would decline slightly, but the prediction has proved untrue.

### Related National Objectives for the Year 2000

- o Reduce pregnancies among girls aged 17 and younger to no more than 50 per 1,000 adolescents.
- o Reduce pregnancies among black girls aged 15 through 19 to no more than 120 per 1,000 adolescents.
- o Reduce pregnancies among Hispanic girls aged 15 through 19 to no more than 105 per 1,000 adolescents.
- o Reduce to no more than 30 percent the proportion of all pregnancies that are unintended.
- o Reduce to no more than 40 percent the proportion of all pregnancies among black women that are unintended.
- o Reduce the proportion of adolescents who have engaged in sexual intercourse to no more than 15 percent by age 15 and no more than 40 percent by age 17.
- o Increase to at least 40 percent the proportion of ever sexually active adolescents aged 17 and younger who have abstained from sexual activity for the previous three months.
- o Increase to at least 90 percent the proportion of sexually active, unmarried people aged 19 and younger who use contraception, especially combined method contraception that both effectively prevents pregnancy and provides barrier protection against disease.
- o Increase the effectiveness with which family planning methods are used, as measured by a decrease to no more than five percent in the proportion of couples experiencing pregnancy despite use of a contraceptive method.
- o Increase to at least 85 percent the proportion of people aged 10 through 18 who have discussed human sexuality, including values surrounding sexuality, with their parents and/or have received information through other parentally endorsed source, such as youth, school, or religious programs.
- o Increase to 90 percent the proportion of pregnancy counselors who offer positive, accurate information about adoption to their unmarried patients with unintended pregnancies.
- o Increase to at least 60 percent the proportion of primary care providers who provide age-appropriate preconception care and counseling.

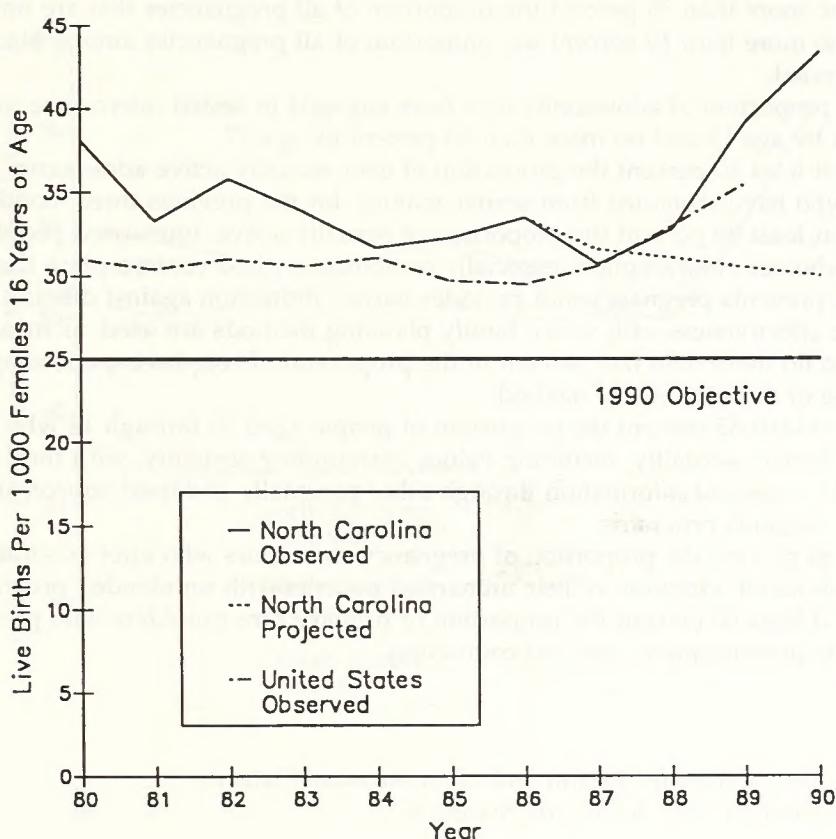
### Data Sources

North Carolina: State Center for Health and Environmental Statistics  
United States: National Center for Health Statistics

## FERTILITY RATES FOR GIRLS 16 YEARS OF AGE NORTH CAROLINA AND UNITED STATES, 1980 - 1990

Year	North Carolina	United States
1980	38.1	31.0
1981	33.3	30.4
1982	35.8	31.0
1983	33.9	30.6
1984	31.7	30.1
1985	32.3	29.7
1986	33.5	29.5
1987	30.7	30.6
1988	32.8	33.0
1989	39.2	35.5
1990	43.4	n.a.

## FERTILITY RATES FOR GIRLS 16 YEARS OF AGE NORTH CAROLINA AND UNITED STATES 1980-1990 NORTH CAROLINA PROJECTED 1987-1990



## FERTILITY RATE FOR GIRLS 17 YEARS OF AGE

### Objective

By 1990, the fertility rate for girls 17 years of age should be reduced to 45 per 1,000.

### Explanatory Notes

The fertility rate is calculated as the number of resident live births to girls aged 17 per 1,000 female population 17 years of age. N.C. population by single year of age is not available prior to 1980.

### Findings

The fertility rate climbed to 72.2 per 1,000 17-year-old females in 1990. U.S. rates have also increased over the past several years, but with the exception of 1988 has been consistently below North Carolina.

### Related National Objectives for the Year 2000

- o Reduce pregnancies among girls aged 17 and younger to no more than 50 per 1,000 adolescents.
- o Reduce pregnancies among black girls aged 15 through 19 to no more than 120 per 1,000 adolescents.
- o Reduce pregnancies among Hispanic girls aged 15 through 19 to no more than 105 per 1,000 adolescents.
- o Reduce to no more than 30 percent the proportion of all pregnancies that are unintended.
- o Reduce to no more than 40 percent the proportion of all pregnancies among black women that are unintended.
- o Reduce the proportion of adolescents who have engaged in sexual intercourse to no more than 15 percent by age 15 and no more than 40 percent by age 17.
- o Increase to at least 40 percent the proportion of ever sexually active adolescents aged 17 and younger who have abstained from sexual activity for the previous three months.
- o Increase to at least 90 percent the proportion of sexually active, unmarried people aged 19 and younger who use contraception, especially combined method contraception that both effectively prevents pregnancy and provides barrier protection against disease.
- o Increase the effectiveness with which family planning methods are used, as measured by a decrease to no more than five percent in the proportion of couples experiencing pregnancy despite use of a contraceptive method.
- o Increase to at least 85 percent the proportion of people aged 10 through 18 who have discussed human sexuality, including values surrounding sexuality, with their parents and/or have received information through other parentally endorsed source, such as youth, school, or religious programs.
- o Increase to 90 percent the proportion of pregnancy counselors who offer positive, accurate information about adoption to their unmarried patients with unintended pregnancies.
- o Increase to at least 60 percent the proportion of primary care providers who provide age-appropriate preconception care and counseling.

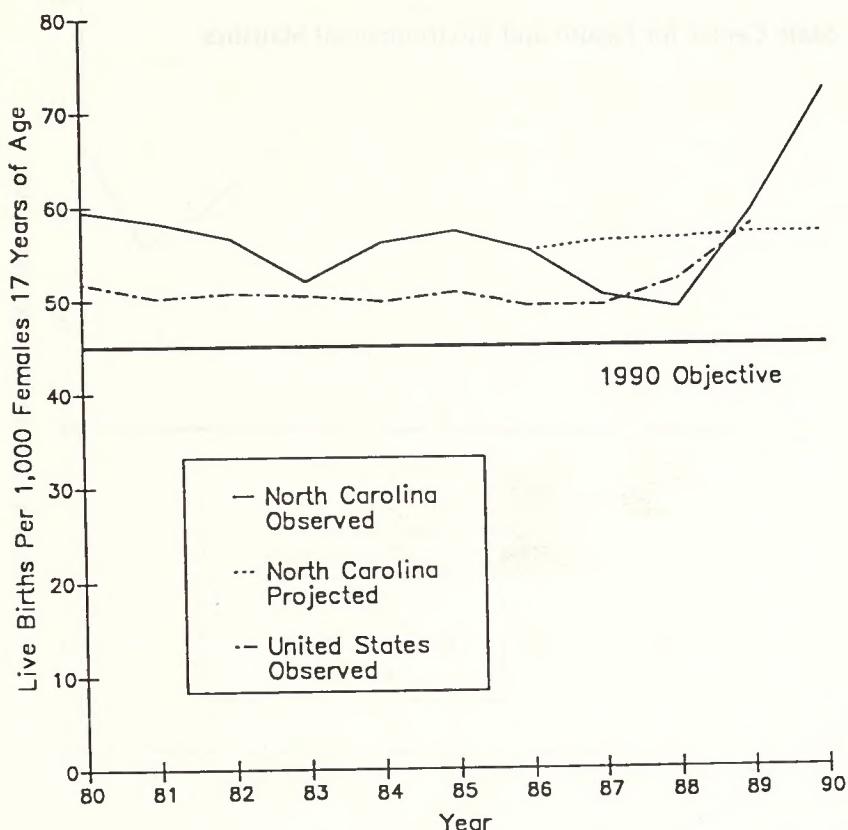
### Data Sources

North Carolina: State Center for Health and Environmental Statistics  
United States: National Center for Health Statistics

## FERTILITY RATES FOR GIRLS 17 YEARS OF AGE NORTH CAROLINA AND UNITED STATES, 1980 - 1990

Year	North Carolina	United States
1980	59.5	51.8
1981	58.3	50.2
1982	56.6	50.7
1983	52.0	50.4
1984	56.1	49.8
1985	57.3	50.8
1986	55.2	49.3
1987	50.4	49.3
1988	49.0	52.0
1989	59.3	57.9
1990	72.2	n.a.

## FERTILITY RATES FOR GIRLS 17 YEARS OF AGE NORTH CAROLINA AND UNITED STATES, 1980-1990 NORTH CAROLINA PROJECTED 1987-1990



## **PERCENTAGE OF ABORTIONS PERFORMED IN THE SECOND TRIMESTER**

### **Objective**

By 1990, the proportion of abortions performed in the second trimester should be reduced to six percent, thereby reducing the death-to-case rate for legal abortions in the U.S. to 0.5 per 100,000.

### **Explanatory Notes**

North Carolina data are available from 1978 through 1990. U.S. data are not available, since some states do not collect abortion data.

### **Findings**

Despite projections which indicated the percentage of late abortions would remain steady, it dropped in 1990 to nearly the same level as in 1979. In 1990, nearly 10 percent of abortions were performed in the second trimester of gestation. The abortion death-to-case rate was 2.9 deaths per 100,000 abortions in 1990.

### **Related National Objectives for the Year 2000**

No related objectives.

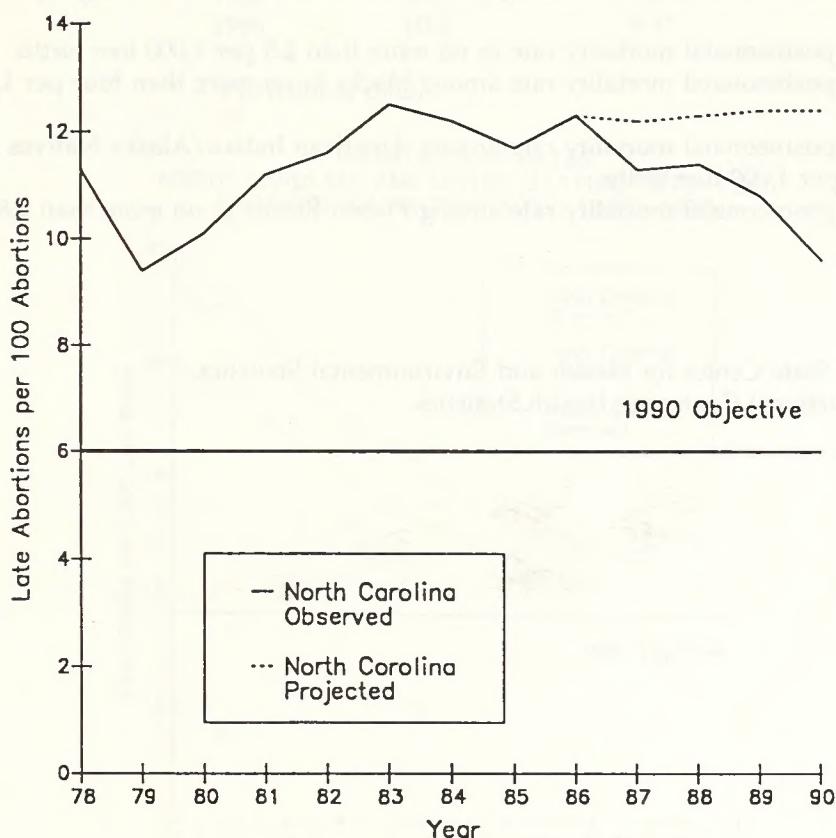
### **Data Source**

North Carolina: State Center for Health and Environmental Statistics

## PERCENTAGE OF ABORTIONS PERFORMED IN THE SECOND TRIMESTER, NORTH CAROLINA, 1978-1990

Year	Percentage
1978	11.3
1979	9.4
1980	10.1
1981	11.2
1982	11.6
1983	12.5
1984	12.2
1985	11.7
1986	12.3
1987	11.3
1988	11.4
1989	10.8
1990	9.6

## PERCENTAGE OF ABORTIONS PERFORMED IN THE SECOND TRIMESTER: NORTH CAROLINA, 1978-1990, PROJECTED 1987-1990



## INFANT DEATH RATE

### Objective

By 1990, the national infant mortality rate should be reduced to no more than nine deaths per 1,000 live births.

### Explanatory Notes

Infant deaths are deaths of residents under one year of age.

### Findings

Since 1970, both the state and national infant mortality rates have decreased slightly more than 55 percent. Despite the steady reduction, North Carolina remains among the states with the highest infant mortality rates. The nation missed achieving the goal by a slim margin with a provisional rate of 9.1.

### Related National Objectives for the Year 2000

- o Reduce the infant mortality rate to no more than seven per 1,000 live births.
- o Reduce the infant mortality rate among blacks to no more than 11 per 1,000 live births.
- o Reduce the infant mortality rate among American Indian/Alaska Natives to no more than 8.5 per 1,000 live births.
- o Reduce the infant mortality rate among Puerto Ricans to no more than eight per 1,000 live births.
- o Reduce the postneonatal mortality rate to no more than 2.5 per 1,000 live births.
- o Reduce the postneonatal mortality rate among blacks to no more than four per 1,000 live births.
- o Reduce the postneonatal mortality rate among American Indian/Alaska Natives to no more than four per 1,000 live births.
- o Reduce the postneonatal mortality rate among Puerto Ricans to no more than 2.8 per 1,000 live births.

### Data Sources

North Carolina: State Center for Health and Environmental Statistics

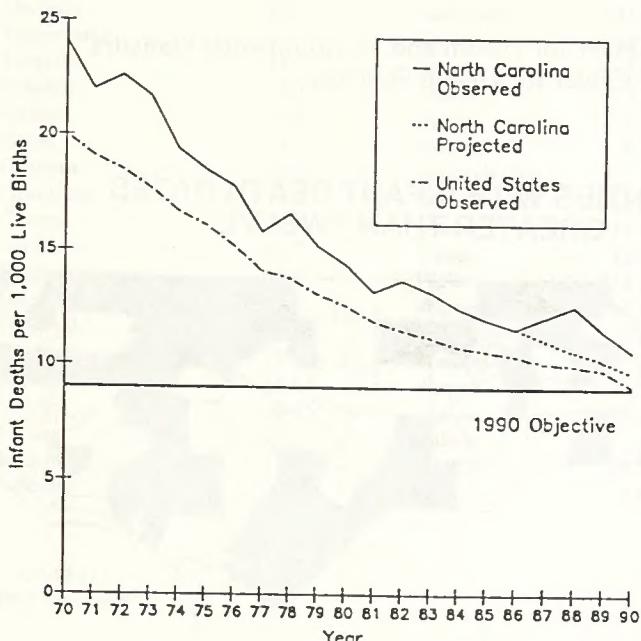
United States: National Center for Health Statistics

## INFANT DEATH RATES NORTH CAROLINA AND UNITED STATES, 1970-1990

Year	North Carolina	United States
1970	24.1	20.0
1971	22.0	19.1
1972	22.6	18.5
1973	21.7	17.7
1974	19.4	16.7
1975	18.5	16.1
1976	17.8	15.2
1977	15.8	14.1
1978	16.6	13.8
1979	15.2	13.1
1980	14.4	12.6
1981	13.2	11.9
1982	13.7	11.5
1983	13.2	11.2
1984	12.5	10.8
1985	12.0	10.6
1986	11.6	10.4
1987	12.1	10.1
1988	12.6	10.0
1989	11.5	9.8
1990	10.6	9.1*

\*Provisional data.

**INFANT DEATH RATES  
NORTH CAROLINA AND UNITED STATES, 1970-1990  
NORTH CAROLINA PROJECTED 1987-1990**



## INFANT DEATH RATES BY COUNTY AND RACE

### Objective

By 1990, no county and no racial or ethnic group of the population should have an infant mortality rate in excess of 12 deaths per 1,000 live births.

### Explanatory Notes

Infant deaths are deaths of residents under one year of age. In order to present more stable rates, county rates are for the five-year period 1986-90. Race categories are identified as white and nonwhite.

### Findings

For the period 1986-90, 42 of the 100 counties experienced infant death rates above 12.0. The county rates ranged from 2.9 in Clay to 20.9 in Washington, as shown on the next page.

As shown on page 18, North Carolina did not achieve the 1990 projected rate for either race. U.S. nonwhites appear unlikely to have achieved the goal of 12.0, and despite substantial reductions, the N.C. nonwhite rate did not come close.

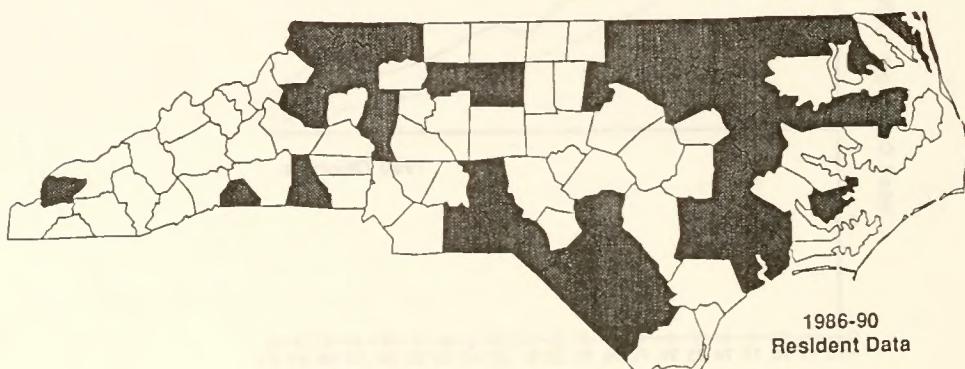
### Similar National Objectives for the Year 2000

- o Reduce the infant mortality rate among blacks to no more than 11 per 1,000 live births.
- o Reduce the infant mortality rate among American Indian/Alaska Natives to no more than 8.5 per 1,000 live births.
- o Reduce the infant mortality rate among Puerto Ricans to no more than eight per 1,000 live births.

### Data Sources

North Carolina: State Center for Health and Environmental Statistics  
United States: National Center for Health Statistics

### COUNTIES WITH INFANT DEATH RATES GREATER THAN TWELVE



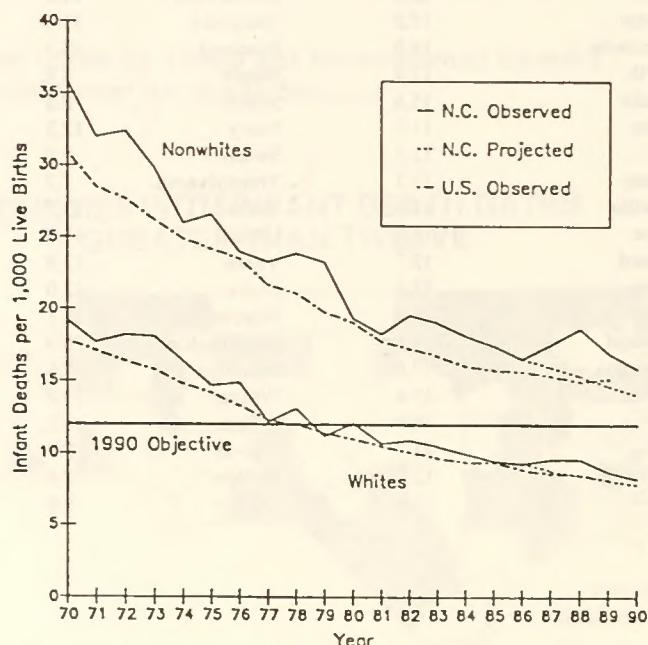
## INFANT DEATH RATES BY COUNTY NORTH CAROLINA, 1986-90

Residence	Rate	Residence	Rate
North Carolina	11.7		
Alamance	9.9	Johnston	9.5
Alexander	9.4	Jones	17.6
Alleghany	15.4	Lee	9.8
Anson	13.9	Lenoir	12.1
Ashe	13.2	Lincoln	7.2
Avery	9.4	McDowell	9.8
Beaufort	10.4	Macon	9.4
Bertie	9.7	Madison	8.5
Bladen	14.4	Martin	12.6
Brunswick	7.8	Mecklenburg	12.0
Buncombe	9.6	Mitchell	3.4
Burke	9.9	Montgomery	12.5
Cabarrus	11.3	Moore	9.6
Caldwell	13.3	Nash	12.8
Camden	7.9	New Hanover	9.5
Carteret	10.2	Northampton	15.7
Caswell	10.7	Onslow	12.1
Catawba	11.6	Orange	10.7
Chatham	8.6	Pamlico	14.0
Cherokee	8.5	Pasquotank	10.2
Chowan	9.5	Pender	9.7
Clay	2.9	Perquimans	16.0
Cleveland	13.2	Person	9.7
Columbus	13.0	Pitt	16.5
Craven	10.9	Polk	15.3
Cumberland	12.5	Randolph	9.8
Currituck	14.8	Richmond	14.7
Dare	4.9	Robeson	13.2
Davidson	10.6	Rockingham	9.7
Davie	6.2	Rowan	10.9
Duplin	12.5	Rutherford	11.1
Durham	12.2	Sampson	11.6
Edgecombe	14.0	Scotland	14.1
Forsyth	12.9	Stanly	8.8
Franklin	15.4	Stokes	8.8
Gaston	11.9	Surry	12.3
Gates	12.3	Swain	9.7
Graham	13.2	Transylvania	7.7
Granville	13.5	Tyrrell	13.7
Greene	16.6	Union	11.5
Guilford	12.7	Vance	12.9
Halifax	15.9	Wake	12.0
Harnett	11.9	Warren	15.1
Haywood	7.1	Washington	20.9
Henderson	12.0	Watauga	7.5
Hertford	13.6	Wayne	10.7
Hoke	10.8	Wilkes	14.2
Hyde	11.7	Wilson	7.9
Iredell	12.9	Yadkin	7.1
Jackson	11.6	Yancey	9.8

## INFANT DEATH RATES BY RACE NORTH CAROLINA AND UNITED STATES, 1970 - 1990

Year	Whites		Nonwhites	
	North Carolina	United States	North Carolina	United States
1970	19.2	17.8	35.8	30.9
1971	17.7	17.1	32.0	28.5
1972	18.2	16.4	32.4	27.7
1973	18.1	15.8	29.8	26.2
1974	16.4	14.8	26.0	24.9
1975	14.7	14.2	26.6	24.2
1976	14.9	13.3	24.0	23.5
1977	12.2	12.3	23.3	21.7
1978	13.1	12.0	23.9	21.1
1979	11.2	11.4	23.3	19.8
1980	12.1	11.0	19.4	19.1
1981	10.7	10.5	18.3	17.8
1982	10.9	10.1	19.6	17.3
1983	10.5	9.7	19.1	16.8
1984	10.0	9.4	18.2	16.1
1985	9.5	9.4	17.5	15.8
1986	9.3	8.9	16.6	15.7
1987	9.6	8.6	17.6	15.4
1988	9.6	8.5	18.7	15.0
1989	8.7	8.2	17.0	15.2
1990	8.2	n.a.	15.9	n.a.

INFANT DEATH RATES BY RACE  
NORTH CAROLINA AND UNITED STATES, 1970-1990  
NORTH CAROLINA PROJECTED 1987-1990



## **NEONATAL DEATH RATE**

### **Objective**

By 1990, the neonatal death rate should be reduced to no more than 6.5 deaths per 1,000 live births.

### **Explanatory Notes**

Neonatal deaths are deaths of residents under 28 days of age.

### **Findings**

North Carolina did not reach the objective for neonatal deaths, although projections indicated it would, based on data from 1982-86. Instead, the neonatal death rate rose in 1987, then continued a downward trend, to end at 7.3 in 1990. The U.S. achieved this objective, with a neonatal death rate of 5.7 (provisional) in 1990.

### **Related National Objectives for the Year 2000**

- o Reduce the neonatal mortality rate to no more than 4.5 per 1,000 live births.
- o Reduce the neonatal mortality rate among blacks to no more than seven per 1,000 live births.
- o Reduce the neonatal mortality rate among Puerto Ricans to no more than 5.2 per 1,000 live births.

### **Data Sources**

North Carolina: State Center for Health and Environmental Statistics

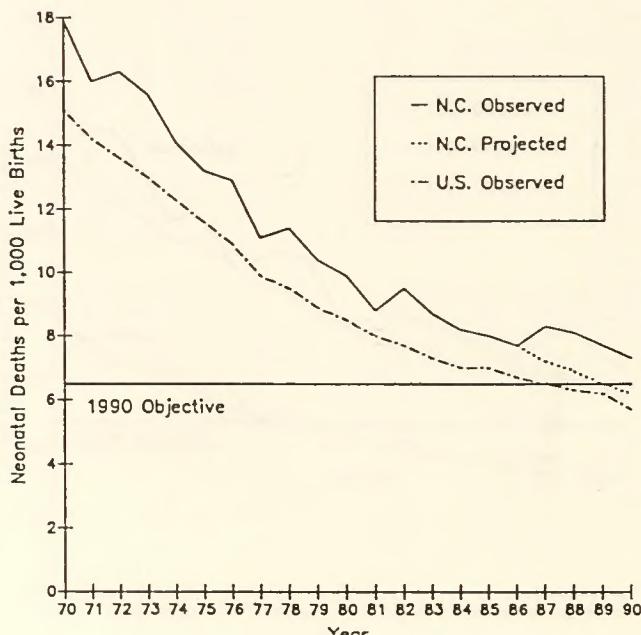
United States: National Center for Health Statistics

## NEONATAL DEATH RATES NORTH CAROLINA AND UNITED STATES, 1970-1990

Year	North Carolina	United States
1970	17.9	15.1
1971	16.0	14.2
1972	16.3	13.6
1973	15.6	13.0
1974	14.1	12.3
1975	13.2	11.6
1976	12.9	10.9
1977	11.1	9.9
1978	11.4	9.5
1979	10.4	8.9
1980	9.9	8.5
1981	8.8	8.0
1982	9.5	7.7
1983	8.7	7.3
1984	8.2	7.0
1985	8.0	7.0
1986	7.7	6.7
1987	8.3	6.5
1988	8.1	6.3
1989	7.7	6.2
1990	7.3	5.7*

\*Provisional data.

### NEONATAL DEATH RATES NORTH CAROLINA AND UNITED STATES, 1970-1990 NORTH CAROLINA PROJECTED, 1987-1990



## MATERNAL DEATH RATES BY COUNTY AND RACE

### Objective

By 1990, the maternal mortality rate should not exceed five per 100,000 live births for any county or for any ethnic group (e.g., Black, Hispanic, American Indian).

### Explanatory Notes

Consists of ICD codes 630-676 of the Ninth Revision and 630-678 of the Eighth Revision. County rates are for the five-year period 1982-86.

### Findings

As shown on the next page, thirty-six of the state's 100 counties experienced some maternal mortality in 1986-90. However, 25 of the 36 counties experienced only one death, and six experienced only two. Due to the instability of small numbers, the application of this objective to counties seems ill-advised; thus, county rates have not been calculated.

Both the white and nonwhite rate rose precipitously in 1990, to far exceed the objective. Likewise, neither race achieved the goal on the national level. North Carolina awaits the 1991 data to determine if the high rates are spikes due to the volatility associated with small numbers, or are due to identifiable health risks or health service problems.

### Related National Objectives for the Year 2000

- o Reduce the maternal mortality rate to no more than 3.3 per 100,000 live births.
- o Reduce the maternal mortality rate among blacks to no more than five per 100,000 live births.

### Data Sources

North Carolina: State Center for Health and Environmental Statistics

United States: National Center for Health Statistics

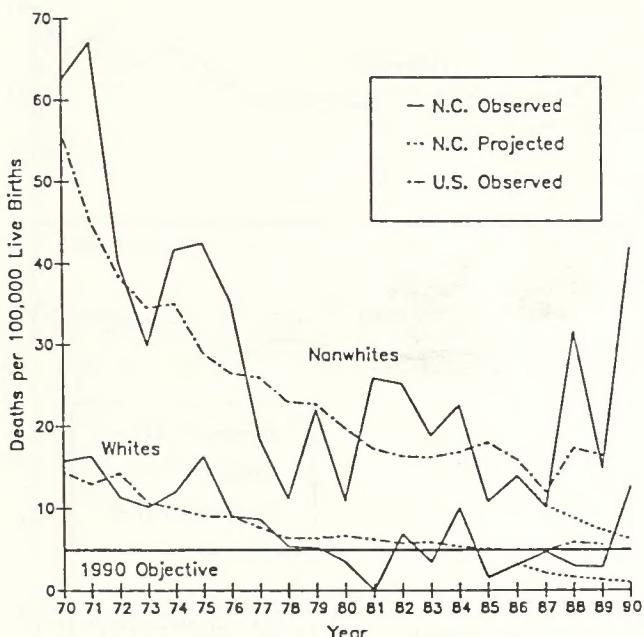
## MATERNAL DEATHS BY COUNTY NORTH CAROLINA, 1986-90

Residence	Number of Deaths
North Carolina	54
Alamance	1
Alexander	1
Beaufort	1
Brunswick	1
Buncombe	1
Catawba	1
Craven	1
Cumberland	4
Dare	1
Davidson	2
Duplin	1
Durham	1
Edgecombe	2
Forsyth	3
Franklin	1
Guilford	1
Halifax	2
Haywood	2
Hertford	1
Iredell	1
Lee	1
Mecklenburg	4
Montgomery	1
Nash	1
Northampton	1
Onslow	3
Orange	1
Pender	1
Pitt	2
Polk	1
Randolph	1
Robeson	1
Scotland	1
Surry	1
Wake	2
Wayne	3

## MATERNAL DEATH RATES BY RACE NORTH CAROLINA AND UNITED STATES, 1970-1990

Year	Whites		Nonwhites	
	North Carolina	United States	North Carolina	United States
1970	15.8	14.4	62.5	55.9
1971	16.4	13.0	67.1	45.3
1972	11.4	14.3	40.2	38.5
1973	10.2	10.7	29.9	34.6
1974	12.1	10.0	41.7	35.1
1975	16.4	9.1	42.5	29.0
1976	9.1	9.0	35.3	26.5
1977	8.7	7.7	18.5	26.0
1978	5.4	6.4	11.2	23.0
1979	5.3	6.4	22.0	22.7
1980	3.5	6.7	11.0	19.8
1981	0.0	6.3	25.9	17.3
1982	6.9	5.8	25.2	16.4
1983	3.5	5.9	18.9	16.3
1984	10.1	5.4	22.6	16.9
1985	1.6	5.2	10.9	18.1
1986	3.2	4.9	14.0	16.0
1987	4.7	5.1	10.1	12.0
1988	3.0	5.9	31.6	17.4
1989	2.9	5.6	14.9	16.5
1990	12.7	n.a.	42.0	n.a.

MATERNAL DEATH RATES BY RACE  
NORTH CAROLINA AND UNITED STATES 1970-1990  
NORTH CAROLINA PROJECTED 1987-1990



## **PERCENT OF LIVE BIRTHS WITH LOW BIRTHWEIGHT**

### **Objective**

By 1990, low birthweight babies (under 2,500 grams) should constitute no more than five percent of all live births.

### **Findings**

Neither North Carolina nor the United States met this objective. It appears that this target is unrealistic. N.C. has fluctuated between 7.9 and 8.1 percent since 1976; the U.S. has remained stable at about 6.9 since 1979.

### **Related National Objectives for the Year 2000**

- o Reduce low birth weight to an incidence of no more than five percent of live births and very low weight births to no more than one percent of live births.
- o Reduce low birth weight among blacks to an incidence of no more than nine percent of live births and very low weight births to no more than two percent of live births.

### **Data Sources**

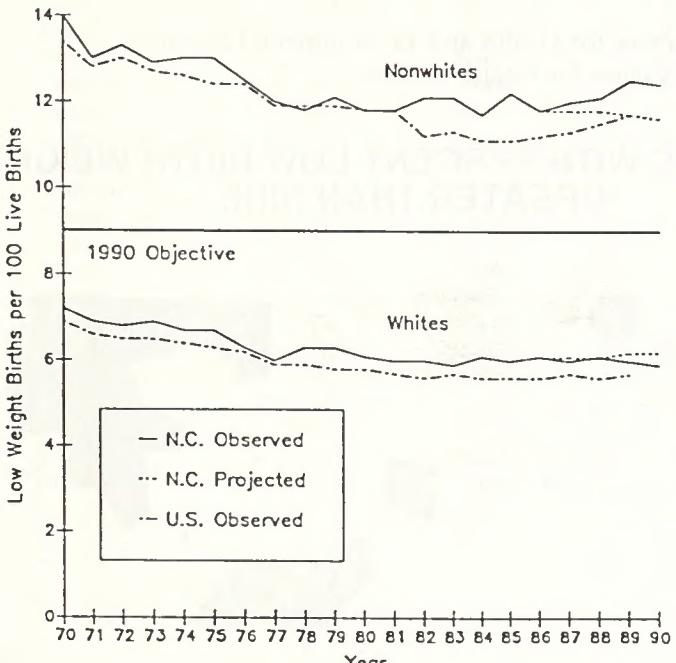
North Carolina: State Center for Health and Environmental Statistics

United States: National Center for Health Statistics

## PERCENT OF LIVE BIRTHS UNDER 2,500 GRAMS NORTH CAROLINA AND UNITED STATES, 1970 - 1990

Year	North Carolina	United States
1970	9.2	7.9
1971	8.7	7.6
1972	8.8	7.6
1973	8.7	7.5
1974	8.6	7.4
1975	8.7	7.4
1976	8.3	7.2
1977	7.9	7.1
1978	8.1	7.1
1979	8.1	6.9
1980	7.9	6.8
1981	7.9	6.8
1982	8.0	6.8
1983	7.9	6.8
1984	7.8	6.7
1985	7.9	6.8
1986	7.9	6.8
1987	7.9	6.9
1988	8.0	6.9
1989	8.1	7.0
1990	8.0	n.a.

PERCENT OF LIVE BIRTHS UNDER 2,500 GRAMS BY RACE  
NORTH CAROLINA AND UNITED STATES 1970-1990  
NORTH CAROLINA PROJECTED 1987-1990



## **PERCENT OF LIVE BIRTHS WITH LOW BIRTHWEIGHT BY COUNTY AND RACE**

### **Objective**

By 1990, no county and no racial or ethnic group of the population (e.g., Black, Hispanic, American Indian) should have a rate of low birthweight infants that exceeds nine percent of all live births.

### **Explanatory Notes**

Low birthweight infants are those weighing 2500 grams (five pounds, eight ounces) or less at birth. More stable results are obtained by using rates for the five-year period 1986-90. For purposes of this report, low birthweight rates are calculated for whites and nonwhites.

### **Findings**

During 1986-90, nineteen of the state's 100 counties experienced low birthweight rates above nine percent (page 27). Ten of the 19 counties had rates under 10 percent, however. For the state, the percentages ranged from 4.6 in Mitchell County to 11.9 in Warren County.

As shown on page 27, the low birthweight percentage for North Carolina whites fluctuated only slightly during the eighties. The nonwhite percentage increased toward the end of the 1980s and was 38 percent above the national target in 1990. Trends for the nation mirror those for North Carolina.

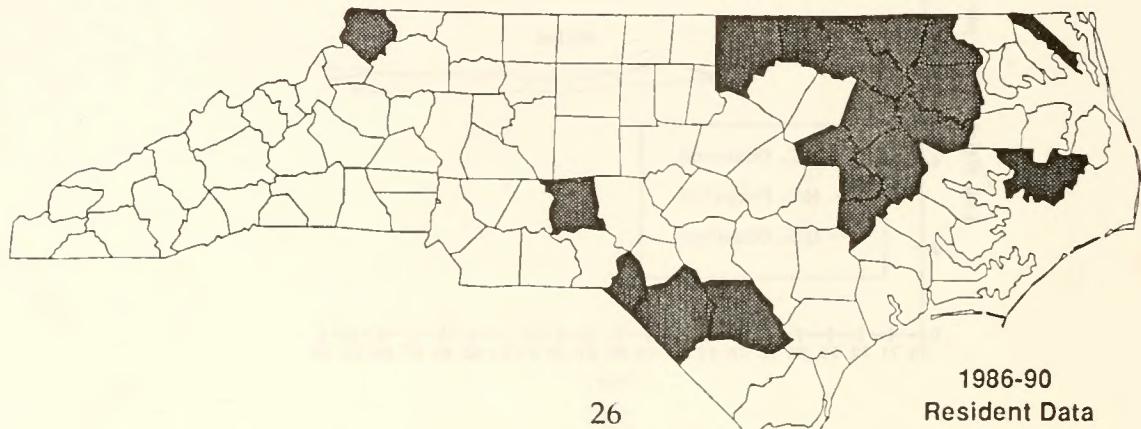
### **Related National Objectives for the Year 2000**

- o Reduce low birth weight among blacks to an incidence of no more than nine percent of live births and very low weight births to no more than two percent of live births.

### **Data Sources**

North Carolina: State Center for Health and Environmental Statistics  
United States: National Center for Health Statistics

## **COUNTIES WITH PERCENT LOW BIRTH WEIGHT GREATER THAN NINE**



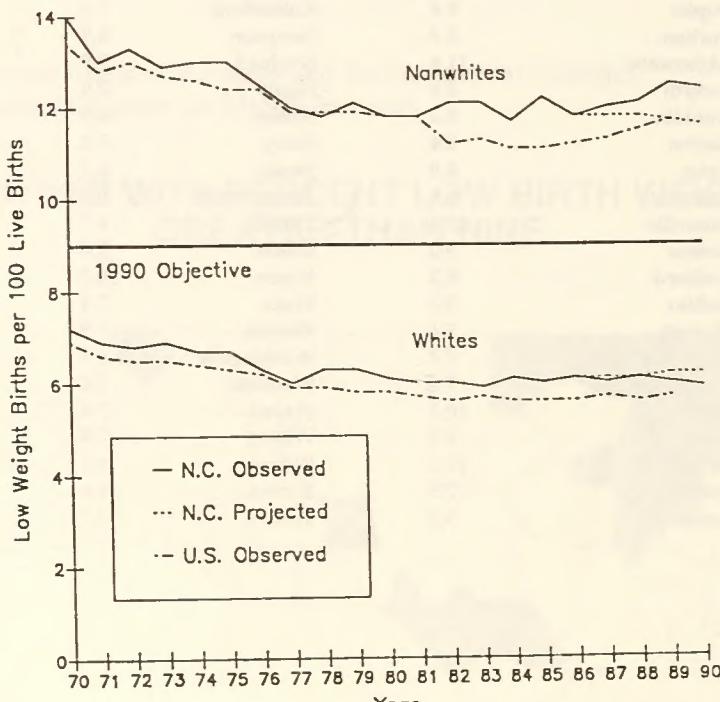
**PERCENT OF LIVE BIRTHS UNDER 2,500 GRAMS  
BY COUNTY, NORTH CAROLINA, 1986-90**

Residence	Percent	Residence	Percent
North Carolina	8.0	Johnston	8.3
Alamance	8.4	Jones	8.7
Alexander	6.8	Lee	8.1
Alleghany	5.1	Lenoir	10.6
Anson	10.4	Lincoln	6.1
Ashe	7.1	McDowell	5.8
Avery	5.6	Macon	6.6
Beaufort	8.7	Madison	7.4
Bertie	9.7	Martin	9.5
Bladen	9.5	Mecklenburg	8.7
Brunswick	7.7	Mitchell	4.6
Buncombe	6.8	Montgomery	9.6
Burke	8.5	Moore	7.8
Cabarrus	8.1	Nash	8.3
Caldwell	7.7	New Hanover	8.3
Camden	9.3	Northampton	10.6
Carteret	6.0	Onslow	6.3
Caswell	8.3	Orange	7.1
Catawba	7.4	Pamlico	8.5
Chatham	6.9	Pasquotank	8.5
Cherokee	5.5	Pender	7.4
Chowan	7.2	Perquimans	7.0
Clay	5.2	Person	8.6
Cleveland	8.7	Pitt	9.4
Columbus	8.7	Polk	6.7
Craven	7.1	Randolph	7.0
Cumberland	7.4	Richmond	8.2
Currituck	6.8	Robeson	9.4
Dare	4.9	Rockingham	8.1
Davidson	7.8	Rowan	7.4
Davie	6.8	Rutherford	7.4
Duplin	8.4	Sampson	8.9
Durham	8.9	Scotland	9.9
Edgecombe	11.4	Stanly	7.9
Forsyth	8.9	Stokes	6.5
Franklin	8.3	Surry	7.2
Gaston	8.4	Swain	6.7
Gates	8.9	Transylvania	5.3
Graham	6.4	Tyrrell	6.5
Granville	10.4	Union	7.4
Greene	9.0	Vance	10.3
Guilford	8.3	Wake	7.1
Halifax	9.2	Warren	11.9
Harnett	7.4	Washington	8.5
Haywood	7.2	Watauga	5.0
Henderson	7.5	Wayne	7.8
Hertford	10.7	Wilkes	7.4
Hoke	8.5	Wilson	9.3
Hyde	10.2	Yadkin	6.6
Iredell	7.5	Yancey	5.7
Jackson	5.8		

**PERCENT OF LIVE BIRTHS UNDER 2,500 GRAMS  
BY RACE, NORTH CAROLINA AND UNITED STATES, 1970 - 1990**

Year	Whites		Nonwhites	
	North Carolina	United States	North Carolina	United States
1970	7.2	6.9	14.0	13.4
1971	6.9	6.6	13.0	12.8
1972	6.8	6.5	13.3	13.0
1973	6.9	6.5	12.9	12.7
1974	6.7	6.4	13.0	12.6
1975	6.7	6.3	13.0	12.4
1976	6.3	6.2	12.5	12.4
1977	6.0	5.9	12.0	11.9
1978	6.3	5.9	11.8	11.9
1979	6.3	5.8	12.1	11.9
1980	6.1	5.8	11.8	11.8
1981	6.0	5.7	11.8	11.8
1982	6.0	5.6	12.1	11.2
1983	5.9	5.7	12.1	11.3
1984	6.1	5.6	11.7	11.1
1985	6.0	5.6	12.2	11.1
1986	6.1	5.6	11.8	11.2
1987	6.0	5.7	12.0	11.3
1988	6.1	5.6	12.1	11.5
1989	6.0	5.7	12.5	11.7
1990	5.9	n.a.	12.4	n.a.

PERCENT OF LIVE BIRTHS UNDER 2,500 GRAMS BY RACE  
NORTH CAROLINA AND UNITED STATES 1970-1990  
NORTH CAROLINA PROJECTED 1987-1990



## **PERCENT OF MOTHERS OBTAINING NO PRENATAL CARE IN FIRST TRIMESTER BY COUNTY AND RACE**

### **Objective**

By 1990, the proportion of women in any county or racial or ethnic group (e.g., Black, Hispanic, American Indian) who obtain no prenatal care during the first trimester of pregnancy should not exceed ten percent.

### **Explanatory Notes**

Percentages are based on live births only. Births having unknown month of first prenatal visit have been eliminated from the denominator. Races are categorized as white or nonwhite. Data are not available prior to 1974.

### **Findings**

In 1990, all counties except Tyrrell exceeded the national objective of 10 percent. County percentages ranged from 9.1 in Tyrrell to 43.7 in Wayne.

Percentages for late or no prenatal care began a slow rise in the late 1980s. Neither race reached the national objective for prenatal care, but for whites historically and for nonwhites since 1981, the N.C. percentages are better than those for the U.S.

### **Related National Year 2000 Objectives**

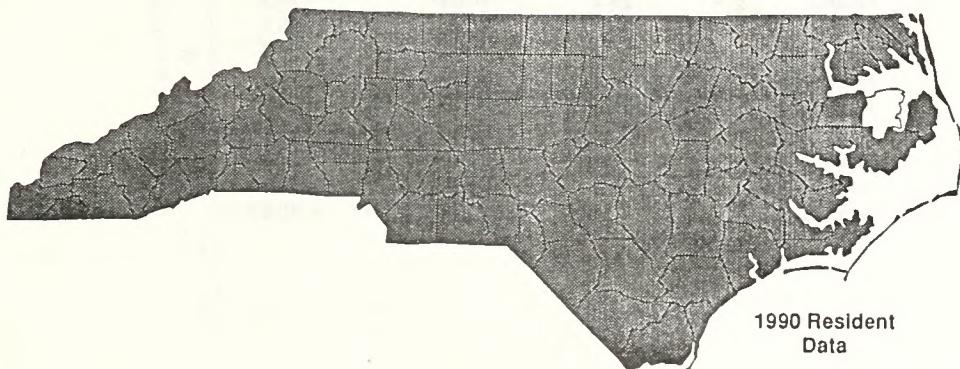
- o Increase to at least 90 percent the proportion of all pregnant women who receive prenatal care in the first trimester of pregnancy.
- o Increase to at least 90 percent the proportion of all pregnant black, American Indian and Hispanic women who receive prenatal care in the first trimester of pregnancy.

### **Data Sources**

North Carolina: State Center for Health and Environmental Statistics

United States: National Center for Health Statistics

### **COUNTIES WITH PERCENT NO PRENATAL CARE IN FIRST TRIMESTER GREATER THAN TEN**



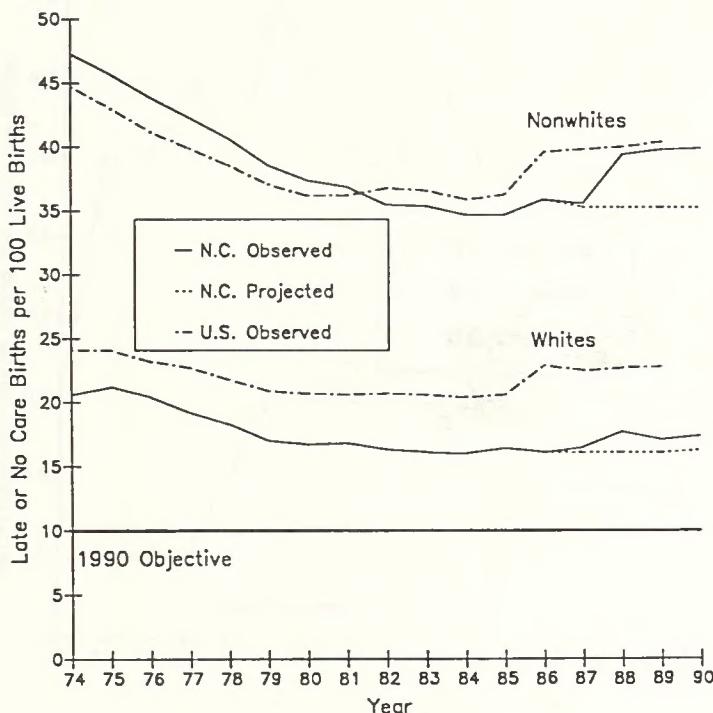
## PERCENT OF MOTHERS OBTAINING NO PRENATAL CARE IN THE FIRST TRIMESTER BY COUNTY, NORTH CAROLINA, 1990

Residence	Percent	Residence	Percent
North Carolina	24.4	Johnston	32.3
Alamance	25.1	Jones	40.8
Alexander	26.4	Lee	24.2
Alleghany	18.9	Lenoir	41.4
Anson	40.0	Lincoln	31.4
Ashe	16.6	McDowell	22.7
Avery	23.3	Macon	19.8
Beaufort	27.8	Madison	12.4
Bertie	24.3	Martin	23.3
Bladen	36.0	Mecklenburg	18.9
Brunswick	25.1	Mitchell	10.4
Buncombe	11.2	Montgomery	34.9
Burke	21.6	Moore	27.6
Cabarrus	27.3	Nash	38.4
Caldwell	25.6	New Hanover	25.8
Camden	19.7	Northampton	28.2
Carteret	21.5	Onslow	15.2
Caswell	24.5	Orange	15.1
Catawba	25.9	Pamlico	34.3
Chatham	22.1	Pasquotank	26.3
Cherokee	20.4	Pender	30.6
Chowan	28.9	Perquimans	33.3
Clay	14.3	Person	23.3
Cleveland	39.5	Pitt	21.3
Columbus	26.5	Polk	20.9
Craven	30.9	Randolph	22.1
Cumberland	19.3	Richmond	34.1
Currituck	27.5	Robeson	38.1
Dare	18.7	Rockingham	28.3
Davidson	24.0	Rowan	35.3
Davie	19.1	Rutherford	19.2
Duplin	31.8	Sampson	38.4
Durham	19.1	Scotland	43.3
Edgecombe	37.1	Stanly	33.8
Forsyth	18.7	Stokes	11.0
Franklin	23.1	Surry	15.0
Gaston	32.2	Swain	26.6
Gates	17.6	Transylvania	25.2
Graham	21.9	Tyrrell	9.1
Granville	25.0	Union	22.7
Greene	28.6	Vance	39.3
Guilford	24.1	Wake	18.3
Halifax	28.3	Warren	25.1
Harnett	28.9	Washington	26.2
Haywood	21.6	Watauga	13.8
Henderson	14.3	Wayne	43.7
Hertford	22.8	Wilkes	10.3
Hoke	25.2	Wilson	23.2
Hyde	38.4	Yadkin	18.1
Iredell	31.8	Yancey	10.1
Jackson	22.4		

**PERCENT OF MOTHERS OBTAINING NO PRENATAL CARE IN  
THE FIRST TRIMESTER BY RACE  
NORTH CAROLINA AND UNITED STATES, 1974 - 1990**

Year	Whites		Nonwhites	
	North Carolina	United States	North Carolina	United States
1974	20.6	24.1	47.3	44.7
1975	21.2	24.1	45.7	43.0
1976	20.4	23.2	43.9	41.2
1977	19.2	22.7	42.3	39.9
1978	18.3	21.8	40.7	38.6
1979	17.0	20.9	38.6	37.1
1980	16.7	20.7	37.4	36.2
1981	16.8	20.6	36.9	36.2
1982	16.3	20.7	35.5	36.8
1983	16.1	20.6	35.4	36.6
1984	16.0	20.4	34.7	35.9
1985	16.4	20.6	34.7	36.3
1986	16.1	22.9	35.9	39.6
1987	16.5	22.5	35.6	39.8
1988	17.7	22.7	39.4	40.0
1989	17.1	22.8	39.8	40.4
1990	17.4	n.a.	39.9	n.a.

**PERCENT OF MOTHERS OBTAINING NO PRENATAL CARE  
IN FIRST TRIMESTER BY RACE:  
NORTH CAROLINA AND UNITED STATES 1974-1990  
NORTH CAROLINA PROJECTED 1987-1990**



## **PERCENT OF MOTHERS NOT ATTENDED BY A PHYSICIAN OR MIDWIFE**

### **Objective**

By 1990, virtually all women who give birth should have appropriately attended, safe delivery, provided in ways acceptable to them and their families.

### **Explanatory Notes**

Assumes that "appropriately attended, safe delivery" means delivery by a physician or midwife. In North Carolina, midwife deliveries are almost exclusively performed by certified nurse midwives. U.S. data are not comparable prior to 1975. No data on "acceptability" of delivery services.

### **Findings**

With the North Carolina percentage of unattended deliveries falling well below one percent, a goal of "virtually all" can be claimed.

### **Related National Year 2000 Objectives**

No related objectives.

### **Data Sources**

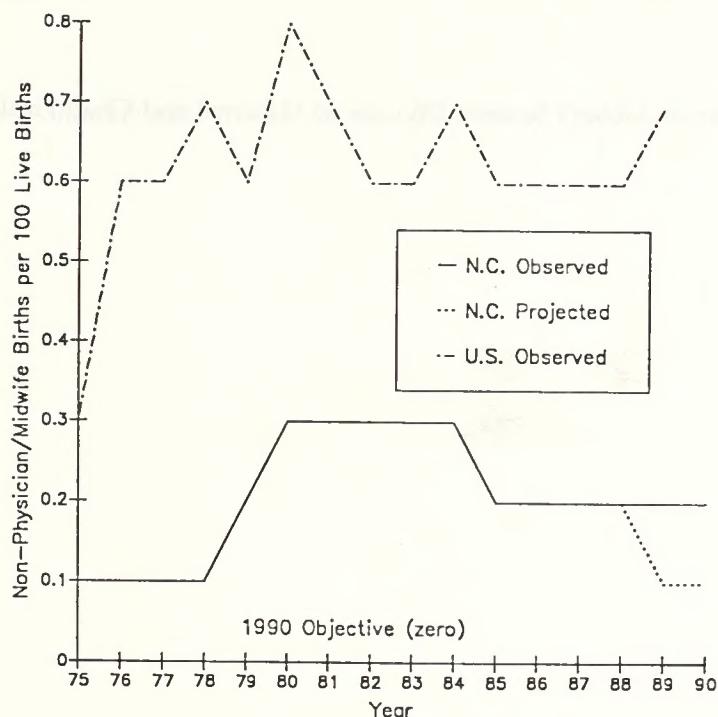
North Carolina: State Center for Health and Environmental Statistics

United States: National Center for Health Statistics

**PERCENT OF MOTHERS NOT ATTENDED  
BY A PHYSICIAN OR MIDWIFE  
NORTH CAROLINA AND UNITED STATES, 1975 - 1990**

Year	North Carolina	United States
1975	.1	.3
1976	.1	.6
1977	.1	.6
1978	.1	.7
1979	.2	.6
1980	.3	.8
1981	.3	.7
1982	.3	.6
1983	.3	.6
1984	.3	.7
1985	.2	.6
1986	.2	.6
1987	.2	.6
1988	.2	.6
1989	.2	.7
1990	.2	n.a.

**PERCENT OF MOTHERS NOT ATTENDED BY A  
PHYSICIAN OR MIDWIFE  
NORTH CAROLINA AND UNITED STATES 1975-1990  
NORTH CAROLINA PROJECTED 1987-1990**



## **PERCENT OF NEWBORNS SCREENED FOR METABOLIC DISORDERS**

### **Objective**

By 1990, virtually all newborns should be provided neonatal screening for metabolic disorders for which effective and efficient tests and treatments are available (e.g., phenylketonuria [PKU] and congenital hypothyroidism).

### **Explanatory Notes**

In 1985, all 50 states and the District of Columbia had newborn screening programs that included at a minimum PKU and hypothyroidism. However, not every state enforces testing, and detailed data for the percent of neonates screened is not available for every state.<sup>3</sup>

North Carolina does not have a mandatory state testing law, but every hospital in North Carolina routinely tests newborns for PKU, hypothyroidism, galactosemia, and congenital adrenal hyperplasia. Since July 1987, nonwhite newborns have also been tested for hemoglobinopathy.

### **Findings**

In North Carolina, the goal of "virtually all" can be claimed since only children born outside the hospital setting are not tested at birth. Before a birth certificate is issued at a local health department, blood samples are taken for neonatal testing, even if the child is more than one month old.

### **Related National Year 2000 Objectives**

No related objectives.

### **Information Source**

North Carolina: Children and Youth Section, Division of Maternal and Child Health

## **PERCENT OF KINDERGARTEN AND FIRST GRADE CHILDREN WHO ARE FULLY IMMUNIZED**

### **Objective**

By 1990, at least 95 percent of children attending licensed day care facilities and kindergarten through 12th grade should be fully immunized.

### **Explanatory Notes**

Trend data available for N.C. are for kindergarten and first grade children, thus are not strictly comparable to the national objective. For both the state and the nation in 1980-86, the minimum requirements were the same: three doses of DTP, three doses of OPV, one dose of measles, and one dose of rubella vaccine. Beginning in 1987, North Carolina's immunization law was changed to require five DTP, four OPV, one measles, one rubella, and one mumps vaccine for children entering kindergarten and first grade.

### **Findings**

North Carolina's children far exceeded the national objective for immunization except in 1987, when requirements changed.

### **Related National Year 2000 Objectives**

- o Expand immunization laws for schools, preschools, and day care settings to all states for all antigens.
- o Increase to 90 percent the proportion of primary care providers who provide information and counseling about immunizations and offer immunizations as appropriate for their patients.

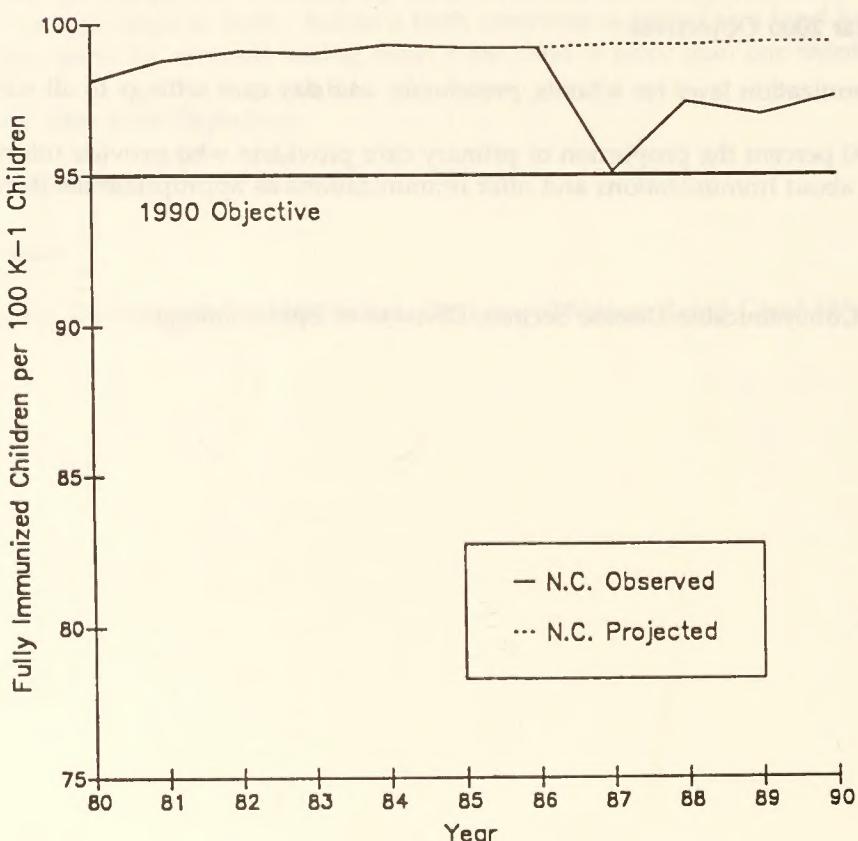
### **Data Sources**

North Carolina: Communicable Disease Section, Division of Epidemiology

## PERCENT OF KINDERGARTEN AND FIRST GRADE CHILDREN WHO ARE FULLY IMMUNIZED, NORTH CAROLINA, 1980-1990

Year	Percent Immunized
1980	98.1
1981	98.8
1982	99.1
1983	99.0
1984	99.3
1985	99.2
1986	99.2
1987	95.1
1988	97.4
1989	97.0
1990	97.6

### PERCENT OF KINDERGARTEN AND FIRST GRADE CHILDREN WHO ARE FULLY IMMUNIZED NORTH CAROLINA 1980-1990 NORTH CAROLINA PROJECTED 1987-1990



## **REPORTED INCIDENCE OF GONORRHEA**

### **Objective**

By 1990, reported gonorrhea incidence should be reduced to a rate of 280 cases per 100,000 population.

### **Explanatory Notes**

Includes all sites.

### **Findings**

The North Carolina gonorrhea case rate has been consistently higher than the nation's - 83 percent higher in 1990. Following a peak rate in 1982, the state's rate declined to 502 cases per 100,000 population in 1990. The U.S. barely met the objective with a rate of 276.6 per 100,000 population. It is possible that differences in reporting completeness could account for some of the differences between state and national rates.

### **Related National Year 2000 Objectives**

- o Reduce gonorrhea to an incidence of no more than 225 cases per 100,000 population.
- o Reduce gonorrhea among blacks to an incidence of no more than 1,300 cases per 100,000 population.
- o Reduce gonorrhea among adolescents aged 15-19 to an incidence of no more than 750 cases per 100,000 population.
- o Reduce gonorrhea among women aged 15-44 to an incidence of no more than 290 cases per 100,000 population.
- o Reduce the rate of repeat gonorrhea infection to no more than 15 percent within the previous year.

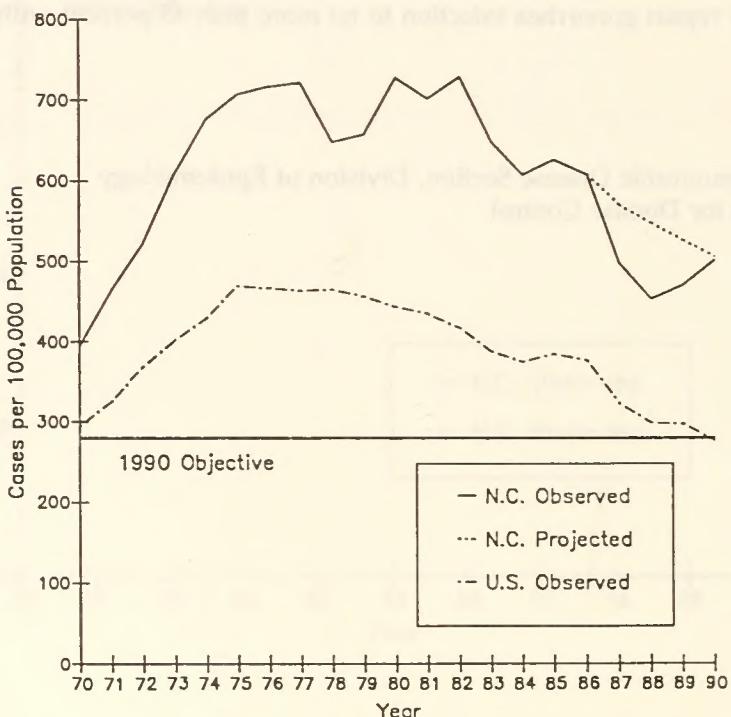
### **Data Sources**

North Carolina: Communicable Disease Section, Division of Epidemiology  
United States: Centers for Disease Control

## GONORRHEA CASE RATES NORTH CAROLINA AND UNITED STATES, 1970-1990

Year	North Carolina	United States
1970	394.5	294.4
1971	463.2	325.0
1972	520.6	368.4
1973	609.4	401.5
1974	676.7	428.6
1975	706.8	469.2
1976	716.5	466.8
1977	721.5	463.3
1978	648.6	464.8
1979	658.1	456.2
1980	727.4	443.3
1981	701.7	434.8
1982	728.3	417.5
1983	748.5	387.6
1984	607.5	374.8
1985	626.2	384.5
1986	608.1	376.4
1987	498.4	323.1
1988	453.5	298.7
1989	470.7	297.4
1990	502.0	276.6

**GONORRHEA CASE RATES  
NORTH CAROLINA AND UNITED STATES 1970-1990  
NORTH CAROLINA PROJECTED 1987-1990**



## **REPORTED INCIDENCE OF SYPHILIS**

### **Objective**

By 1990, reported primary and secondary syphilis incidence should be reduced to a rate of seven cases per 100,000 population per year, with a reduction in congenital syphilis to 1.5 cases per 100,000 children under one year of age.

### **Findings**

The North Carolina syphilis rate has fluctuated widely from a low of 8.1 in 1979 to a high of 26.4 in 1990. U.S. rates also increased during the eighties.

The congenital syphilis rate in North Carolina has fluctuated from 30.5 in 1970 to zero in 1986 back up to 33.5 in 1990. This follows an increase in primary/secondary syphilis among females. Syphilis in North Carolina increased to a new high over the 20-year span. All cases of congenital syphilis in North Carolina are investigated by HIV/STD disease intervention specialists.

### **Related National Year 2000 Objectives**

- o Reduce primary and secondary syphilis to an incidence of no more than 10 cases per 100,000 people.
- o Reduce congenital syphilis to an incidence of no more than 50 cases per 100,000 live births.

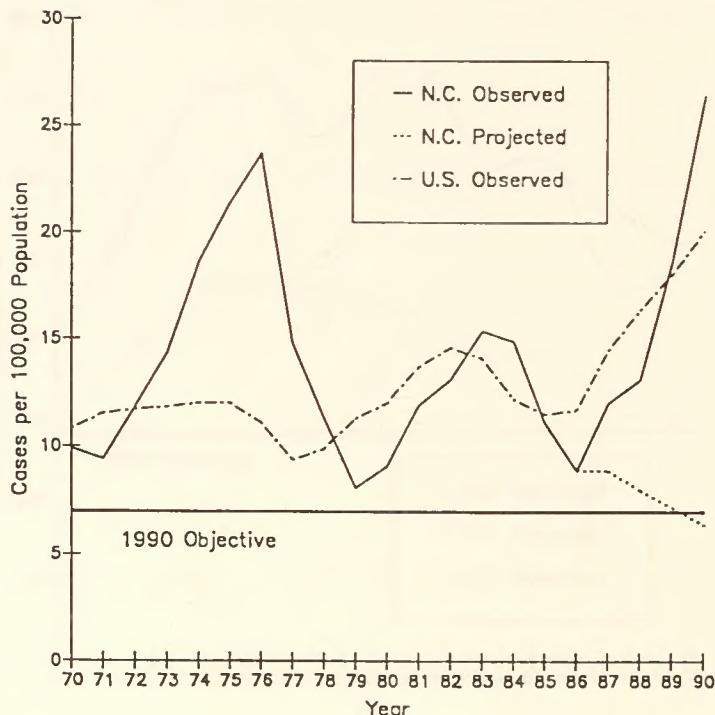
### **Data Sources**

North Carolina: Communicable Disease Section, Division of Epidemiology  
United States: Centers for Disease Control

## PRIMARY/SECONDARY SYPHILIS CASE RATES NORTH CAROLINA AND UNITED STATES, 1970 -1990

Year	North Carolina	United States
1970	9.9	10.8
1971	9.4	11.5
1972	11.8	11.7
1973	14.3	11.8
1974	18.6	12.0
1975	21.4	12.0
1976	23.7	11.1
1977	14.8	9.4
1978	11.3	9.9
1979	8.1	11.3
1980	9.1	12.0
1981	11.9	13.7
1982	13.1	14.6
1983	15.4	14.1
1984	14.9	12.2
1985	11.1	11.5
1986	8.9	11.7
1987	12.0	14.5
1988	13.1	16.4
1989	18.7	18.1
1990	26.4	20.1

PRIMARY AND SECONDARY SYPHILIS CASE RATES  
NORTH CAROLINA AND UNITED STATES 1970-1990  
NORTH CAROLINA PROJECTED 1987-1990



## **II. HEALTH PROTECTION**

### **1. ACCIDENT PREVENTION AND INJURY CONTROL**

Health and Safety at Work Act 1974 requires employers to make arrangements to prevent and control risks to health and safety in the workplace.

Employers must have regard to the principles of prevention set out in the Health and Safety at Work etc. Act 1974.

Employers must have regard to the following principles:

to eliminate risks to health and safety so far as is reasonably practicable;

to assess risks to health and safety so far as is reasonably practicable;

to consult with employees so far as is reasonably practicable;

to provide information, instruction, training and supervision so far as is reasonably practicable;

to take account of the needs of employees with disabilities so far as is reasonably practicable;

to take account of the needs of employees who are pregnant or may become pregnant so far as is reasonably practicable;

to take account of the needs of employees who are nursing or may become nursing so far as is reasonably practicable;

to take account of the needs of employees who are young persons so far as is reasonably practicable;

to take account of the needs of employees who are disabled so far as is reasonably practicable;

to take account of the needs of employees who are pregnant or may become pregnant so far as is reasonably practicable;

to take account of the needs of employees who are nursing or may become nursing so far as is reasonably practicable;

to take account of the needs of employees who are disabled so far as is reasonably practicable;

to take account of the needs of employees who are pregnant or may become pregnant so far as is reasonably practicable;

to take account of the needs of employees who are nursing or may become nursing so far as is reasonably practicable;

to take account of the needs of employees who are disabled so far as is reasonably practicable;

to take account of the needs of employees who are pregnant or may become pregnant so far as is reasonably practicable;

to take account of the needs of employees who are nursing or may become nursing so far as is reasonably practicable;

to take account of the needs of employees who are disabled so far as is reasonably practicable;

### **II. HEALTH PROTECTION**

#### **ACCIDENT PREVENTION AND INJURY CONTROL**

#### **SURVEILLANCE AND CONTROL OF INFECTIOUS DISEASE**

## MOTOR VEHICLE DEATH RATE

### Objective

By 1990, the motor vehicle fatality rate should be reduced to no greater than 18 per 100,000 population.

### Explanatory Notes

Comprised of ICD codes E810-825 of the Ninth Revision and E810-823 of the Eighth Revision.

### Findings

North Carolina's motor vehicle fatality rate continues to run above the nation's with a 1990 rate of 21.8 deaths per 100,000 population. The U.S. also remained above the goal at 19.1 in 1990 (provisional).

### Related National Year 2000 Objectives

- o Reduce deaths caused by motor vehicle crashes to no more than 1.9 per 100 million vehicle miles traveled and 16.8 per 100,000 people.
- o Reduce deaths caused by motor vehicle crashes to children aged 14 and younger to no more than 5.5 per 100,000 people.
- o Reduce deaths caused by motor vehicle crashes to youth aged 15-24 to no more than 33 per 100,000 people.
- o Reduce deaths caused by motor vehicle crashes to people aged 70 and older to no more than 20 per 100,000 people.
- o Reduce deaths caused by motor vehicle crashes to American Indian/Alaska Natives to no more than 39.2 per 100,000 people.
- o Reduce deaths caused by motor vehicle crashes involving motorcyclists to 33 per 100 million vehicle miles traveled.
- o Reduce deaths involving pedestrians to 2.7 per 100 million vehicle miles traveled.

### Data Sources

North Carolina: State Center for Health and Environmental Statistics

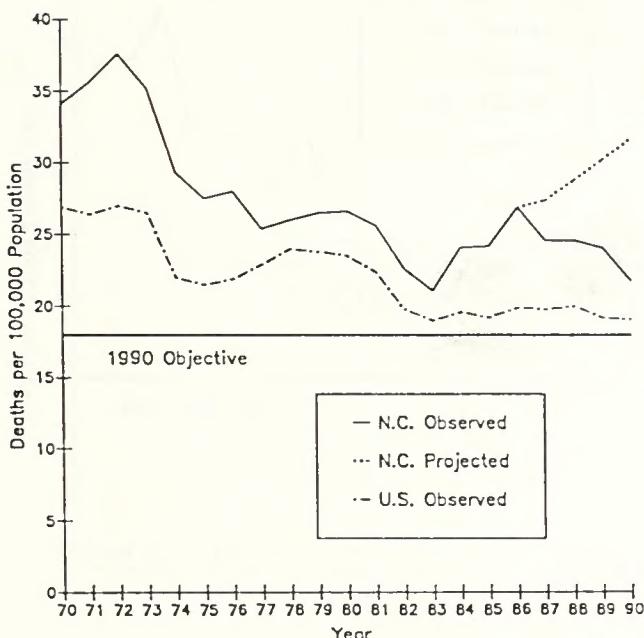
United States: National Center for Health Statistics

## MOTOR VEHICLE DEATH RATES NORTH CAROLINA AND UNITED STATES, 1970-1990

Year	North Carolina	United States
1970	34.1	26.9
1971	35.6	26.4
1972	37.6	27.0
1973	35.2	26.5
1974	29.3	22.0
1975	27.5	21.5
1976	28.0	21.9
1977	25.4	22.9
1978	26.0	24.0
1979	26.5	23.8
1980	26.6	23.5
1981	25.6	22.4
1982	22.6	19.8
1983	21.1	19.0
1984	24.1	19.6
1985	24.2	19.2
1986	26.9	19.9
1987	24.6	19.8
1988	24.6	20.0
1989	24.1	19.2
1990	21.8	19.1*

\*Provisional data.

### MOTOR VEHICLE DEATH RATES NORTH CAROLINA AND UNITED STATES 1970-1990 NORTH CAROLINA PROJECTED 1987-1990



# MOTOR VEHICLE DEATH RATE FOR CHILDREN UNDER AGE 15

## Objective

By 1990, the motor vehicle fatality rate for children under 15 should be reduced to no greater than 5.5 per 100,000 population.

## Explanatory Notes

Comprised of ICD codes E810-825 of the Ninth Revision and E810-823 of the Eighth Revision.

## Findings

Although substantially above the U.S. for most of the period from 1970 to 1990, the North Carolina motor vehicle death rate dropped sharply in 1990. The 1990 rate, 6.6, is still above the objective set for the nation.

## Related National Year 2000 Objectives

- o Reduce deaths caused by motor vehicle crashes to children aged 14 and younger to no more than 5.5 per 100,000 people.

## Data Sources

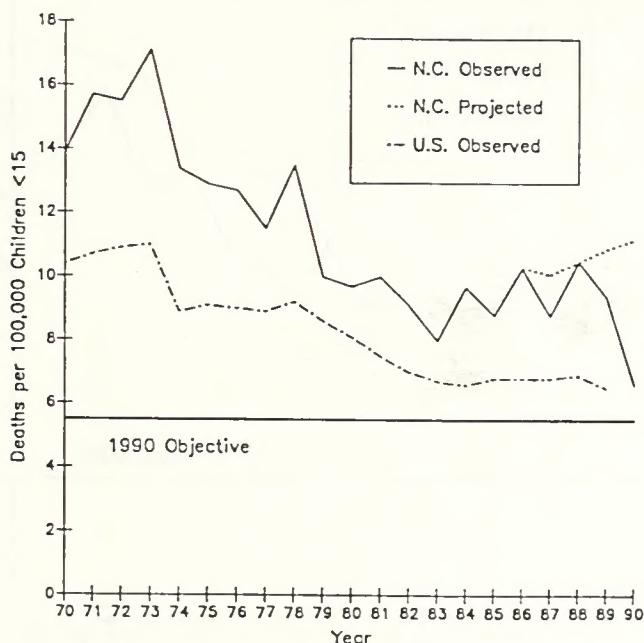
North Carolina: State Center for Health and Environmental Statistics

United States: National Center for Health Statistics

## MOTOR VEHICLE DEATH RATES FOR CHILDREN UNDER AGE 15 NORTH CAROLINA AND UNITED STATES, 1970 - 1990

Year	North Carolina	United States
1970	13.9	10.4
1971	15.7	10.7
1972	15.5	10.9
1973	17.1	11.0
1974	13.4	8.9
1975	12.9	9.1
1976	12.7	9.0
1977	11.5	8.9
1978	13.5	9.2
1979	10.0	8.6
1980	9.7	8.1
1981	10.0	7.5
1982	9.1	7.0
1983	8.0	6.7
1984	9.7	6.6
1985	8.8	6.8
1986	10.3	6.8
1987	8.8	6.8
1988	10.5	6.9
1989	9.4	6.5
1990	6.6	n.a.

MOTOR VEHICLE DEATH RATES FOR CHILDREN  
UNDER AGE 15:  
NORTH CAROLINA AND UNITED STATES 1970-1990  
NORTH CAROLINA PROJECTED 1987-1990



## DEATH RATE FOR ACCIDENTAL FALLS

### Objective

By 1990, the death rate from falls should be reduced to no more than two per 100,000 population.

### Explanatory Notes

Includes ICD codes E880-888 of the Ninth Revision and E880-887 of the Eighth Revision.

### Findings

North Carolina's death rate from accidental falls rose in 1987 and 1988 and then declined. Traditionally, N.C.'s rate has been below that of the nation, but it appears likely that the state's rate will exceed that of the nation in 1990.

### Related National Year 2000 Objectives

- o Reduce deaths from falls and fall-related injuries to no more than 2.3 per 100,000 people.
- o Reduce deaths from falls and fall-related injuries among people aged 65-84 to no more than 14.4 per 100,000 people.
- o Reduce deaths from falls and fall-related injuries among people aged 85 and older to no more than 105 per 100,000 people.
- o Reduce deaths from falls and fall-related injuries among black men 30-69 to no more than 5.6 per 100,000 people.

### Data Sources

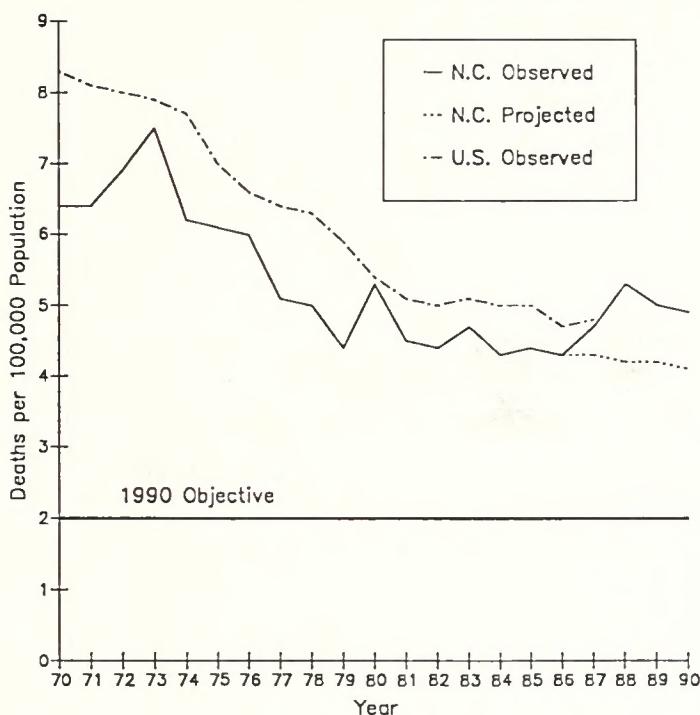
North Carolina: State Center for Health and Environmental Statistics

United States: National Center for Health Statistics

## DEATH RATES FOR ACCIDENTAL FALLS NORTH CAROLINA AND UNITED STATES, 1970-1990

Year	North Carolina	United States
1970	6.4	8.3
1971	6.4	8.1
1972	6.9	8.0
1973	7.5	7.9
1974	6.2	7.7
1975	6.1	7.0
1976	6.0	6.6
1977	5.1	6.4
1978	5.0	6.3
1979	4.4	5.9
1980	5.3	5.4
1981	4.5	5.1
1982	4.4	5.0
1983	4.7	5.1
1984	4.3	5.0
1985	4.4	5.0
1986	4.3	4.7
1987	4.7	4.8
1988	5.3	n.a.
1989	5.0	n.a.
1990	4.9	n.a.

DEATH RATES FOR ACCIDENTAL FALLS  
NORTH CAROLINA AND UNITED STATES 1970-1990  
NORTH CAROLINA PROJECTED 1987-1990



## **DEATH RATE FOR DROWNING**

### **Objective**

By 1990, the death rate from drowning should be reduced to no more than 1.5 per 100,000 persons.

### **Explanatory Notes**

Comprised of ICD codes E830, 832 and 910 of the Eighth and Ninth revisions.

### **Findings**

The North Carolina drowning rate continues to be higher than the national rate; however, substantial progress has been made, with a 58 percent reduction since 1970. Data are not available for the U.S. for 1988-1990, although projections indicate that the U.S. will not reach this objective.

### **Related National Year 2000 Objectives**

- o Reduce drowning deaths to no more than 1.3 per 100,000 people.
- o Reduce drowning deaths among children aged four and younger to no more than 2.3 per 100,000 people.
- o Reduce drowning deaths among men aged 15-34 to no more than 2.5 per 100,000 people.
- o Reduce drowning deaths among black males to no more than 3.6 per 100,000 people.

### **Data Sources**

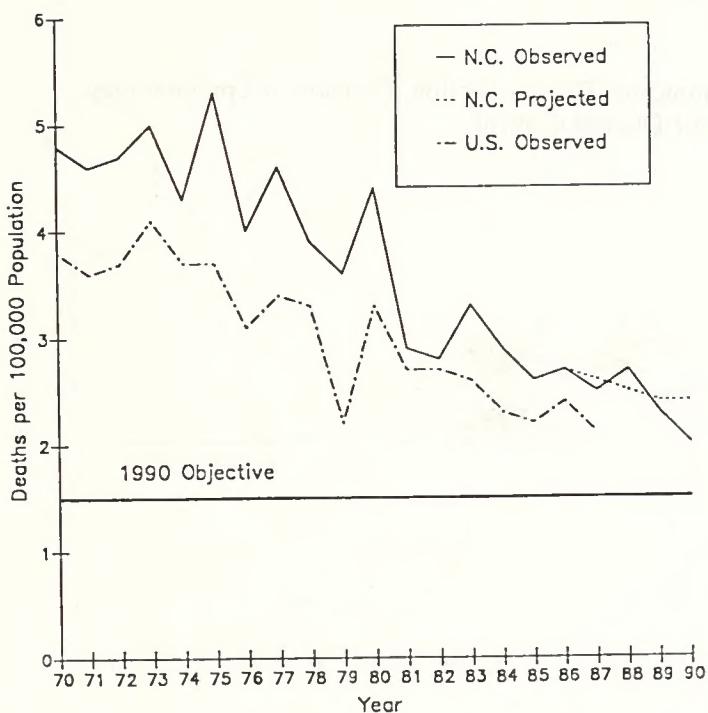
North Carolina: State Center for Health and Environmental Statistics

United States: National Center for Health Statistics

## DEATH RATES FOR DROWNING NORTH CAROLINA AND UNITED STATES, 1970-1990

Year	North Carolina	United States
1970	4.8	3.8
1971	4.6	3.6
1972	4.7	3.7
1973	5.0	4.1
1974	4.3	3.7
1975	5.3	3.7
1976	4.0	3.1
1977	4.6	3.4
1978	3.9	3.3
1979	3.6	3.2
1980	4.4	3.3
1981	2.9	2.7
1982	2.8	2.7
1983	3.3	2.6
1984	2.9	2.3
1985	2.6	2.2
1986	2.7	2.4
1987	2.5	2.1
1988	2.7	n.a.
1989	2.3	n.a.
1990	2.0	n.a.

DEATH RATES FOR DROWNING  
NORTH CAROLINA AND UNITED STATES 1970-1990  
NORTH CAROLINA PROJECTED 1987-1990



# REPORTED INCIDENCE OF TUBERCULOSIS

## Objective

By 1990, the annual reported incidence of tuberculosis should be reduced to eight per 100,000 population.

## Explanatory Notes

Due to a change in reporting criteria, data prior to 1975 are not shown.

## Findings

The North Carolina tuberculosis rate continued to drop in the late 1980s, but rose slightly in 1990. Both N.C. and U.S. rates follow the same trend, despite N.C.'s higher rates for most years. Neither the state nor the nation achieved the goal, both ending at 10.3 cases per 100,000 population in 1990.

## Related Year 2000 Objectives

- o Reduce tuberculosis to an incidence of no more than 3.5 cases per 100,000 people.
- o Reduce tuberculosis among Asians/Pacific Islanders to an incidence of no more than 15 cases per 100,000 people.
- o Reduce tuberculosis among blacks to an incidence of no more than ten cases per 100,000 people.
- o Reduce tuberculosis among Hispanics to an incidence of no more than five cases per 100,000 people.
- o Reduce tuberculosis among American Indians/Alaska Natives to an incidence of no more than five cases per 100,000 people.

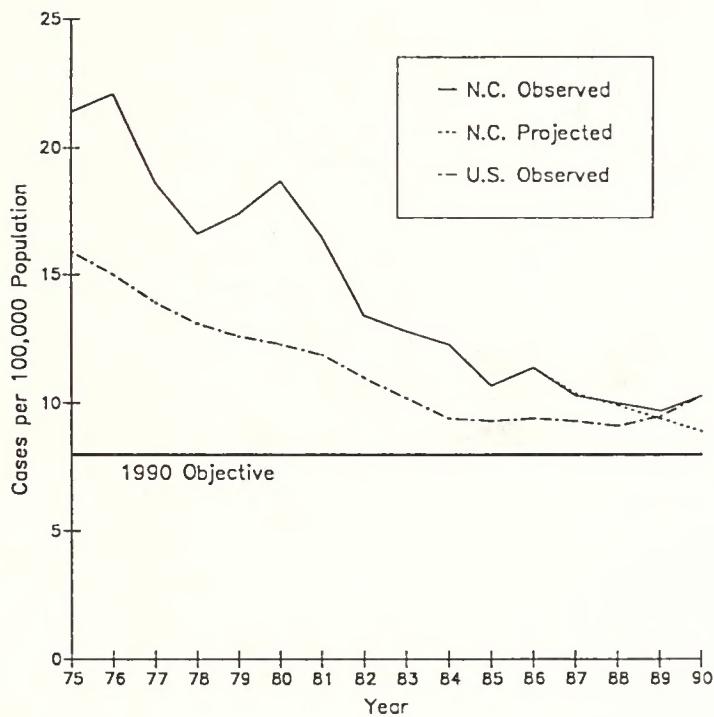
## Data Sources

North Carolina: Communicable Disease Section, Division of Epidemiology  
United States: Centers for Disease Control

## TUBERCULOSIS CASE RATES NORTH CAROLINA AND UNITED STATES, 1975 - 1990

Year	North Carolina	United States
1975	21.4	15.9
1976	22.1	15.0
1977	18.6	13.9
1978	16.6	13.1
1979	17.4	12.6
1980	18.7	12.3
1981	16.5	11.9
1982	13.4	11.0
1983	12.8	10.2
1984	12.3	9.4
1985	10.7	9.3
1986	11.4	9.4
1987	10.3	9.3
1988	10.0	9.1
1989	9.7	9.5
1990	10.3	10.3

**TUBERCULOSIS CASE RATES  
NORTH CAROLINA AND UNITED STATES 1975-1990  
NORTH CAROLINA PROJECTED 1987-1990**



## REPORTED INCIDENCE OF BACTERIAL MENINGITIS

### Objective

By 1990, the annual reported incidence of bacterial meningitis should be reduced to two per 100,000 population.

### Explanatory Notes

Reporting criteria for bacterial meningitis changed in 1978, so that data from 1979 through 1987 are similar. Reporting changed again in 1987, so that data for 1988 - 1990 contain H. flu invasive disease. Current U.S. data not available.

### Findings

Bacterial meningitis rates have been higher since the addition of H. flu invasive disease, so long-term trends are not applicable.

### Related National Year 2000 Objectives

- o Reduce bacterial meningitis to no more than 4.7 cases per 100,000 people.
- o Reduce bacterial meningitis among Alaska Natives to no more than eight cases per 100,000 people.

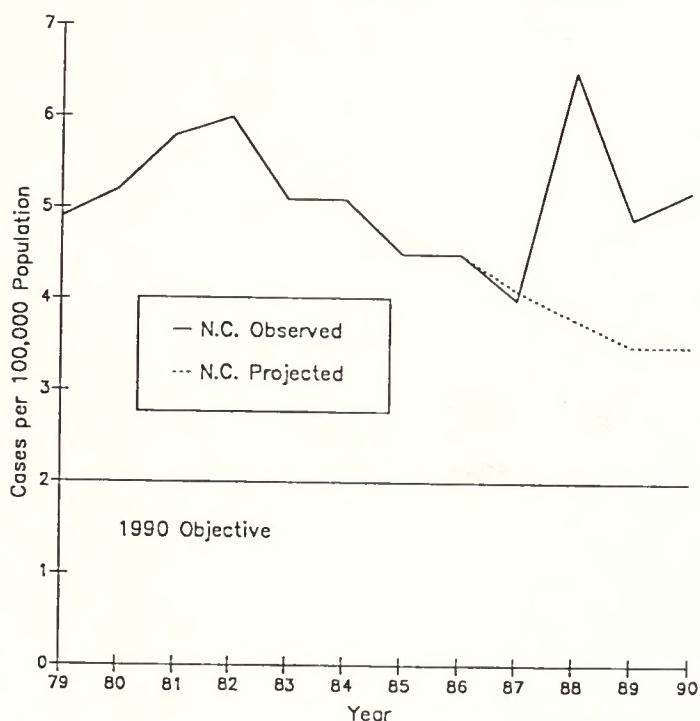
### Data Source

North Carolina: Communicable Disease Section, Division of Epidemiology

## BACTERIAL MENINGITIS CASE RATES NORTH CAROLINA, 1979-1990

Year	Rate
1979	4.9
1980	5.2
1981	5.8
1982	6.0
1983	5.1
1984	5.1
1985	4.5
1986	4.5
1987	4.0
1988	6.5
1989	4.9
1990	5.2

BACTERIAL MENINGITIS CASE RATES  
NORTH CAROLINA 1979-1990  
NORTH CAROLINA PROJECTED 1987-1990





### **III. HEALTH PROMOTION**

## MISUSE OF ALCOHOL AND DRUGS

## CONTROL OF STRESS AND VIOLENT BEHAVIOR

## **DEATH RATE FOR ALCOHOL-RELATED ACCIDENTS EXCEPT MOTOR VEHICLE**

### **Objective**

By 1990, deaths from other (non-motor-vehicle) accidents indirectly attributable to alcohol use should be reduced to five per 100,000 population.

### **Explanatory Notes**

Consists of ICD codes E800-809 and E826-949 of the Ninth Revision with alcohol blood levels of .10 or higher. State data prior to 1980 and for 1990 are not available. U.S. data are not comparable.

### **Findings**

The North Carolina death rate for alcohol-related non-motor-vehicle injuries dropped 22.6 percent between 1980 and 1989. North Carolina achieved the objective in 1982 and has not risen above the objective, despite a recent upward trend.

### **Related National Year 2000 Objectives**

No related objectives.

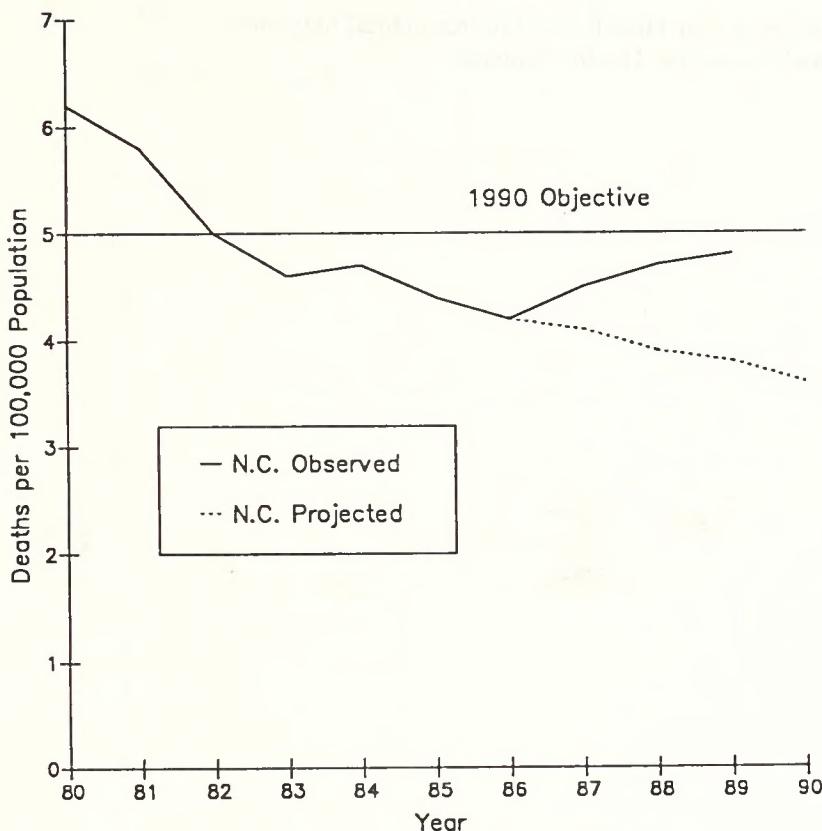
### **Data Source**

North Carolina: Office of Chief Medical Examiner

## DEATH RATES FOR ALCOHOL-RELATED NONMOTOR-VEHICLE ACCIDENTS, NORTH CAROLINA, 1980-1989

Year	Rate
1980	6.2
1981	5.8
1982	5.0
1983	4.6
1984	4.7
1985	4.4
1986	4.2
1987	4.5
1988	4.7
1989	4.8

### DEATH RATES FOR ALCOHOL-RELATED ACCIDENTS (EXCEPT MOTOR VEHICLE) NORTH CAROLINA 1980-1990 NORTH CAROLINA PROJECTED 1987-1990



## CIRRHOSIS DEATH RATE

### Objective

By 1990, the cirrhosis mortality rate should be reduced to 12 per 100,000 per year.

### Explanatory Notes

Includes ICD code 571 of both the Eighth and Ninth revisions.

### Findings

Both North Carolina and the United States achieved this goal in the early 1980s. However, since 1988, N.C. has had higher rates of cirrhosis deaths than the U.S.

### Related National Year 2000 Objectives

- o Reduce cirrhosis deaths to no more than six per 100,000 people.
- o Reduce cirrhosis deaths among black men to no more than 12 per 100,000 people.
- o Reduce cirrhosis deaths among American Indian/Alaska Natives to no more than 13 per 100,000 people.

### Data Sources

North Carolina: State Center for Health and Environmental Statistics

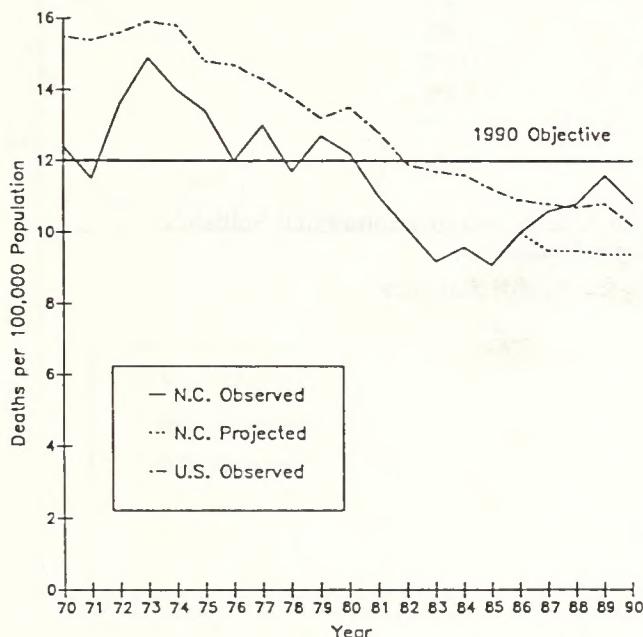
United States: National Center for Health Statistics

## CIRRHOSIS DEATH RATES NORTH CAROLINA AND UNITED STATES, 1970-1990

Year	North Carolina	United States
1970	12.4	15.5
1971	11.5	15.4
1972	13.6	15.6
1973	14.9	15.9
1974	14.0	15.8
1975	13.4	14.8
1976	12.0	14.7
1977	13.0	14.3
1978	11.7	13.8
1979	12.7	13.2
1980	12.2	13.5
1981	11.0	12.8
1982	10.1	11.9
1983	9.2	11.7
1984	9.6	11.6
1985	9.1	11.2
1986	10.0	10.9
1987	10.6	10.8
1988	10.8	10.7
1989	11.6	10.8
1990	10.8	10.2*

\*Provisional data.

**CIRRHOSIS DEATH RATES  
NORTH CAROLINA AND UNITED STATES 1970-1990  
NORTH CAROLINA PROJECTED 1987-1990**



## DRUG-RELATED DEATH RATE

### Objective

By 1990, drug-related mortality should be reduced to two per 100,000 population.

### Explanatory Notes

Excludes deaths caused by alcohol. Consists of ICD codes E850-858, E950.0-950.5, E980.0-980.5 of the Ninth Revision and E850-859, E950.0-950.3 and E980.0-980.3 of the Eighth Revision.

### Findings

Death rates for drug-related causes rose for both North Carolina and the United States during the 1980s. For N.C., the death rates rose faster than projected during the late eighties.

Based on toxicology tests performed on approximately 85 percent of N.C. Medical Examiner cases in 1989, the largest numbers of these deaths involved anti-depressants (51 deaths), abused drugs (64 deaths), and opiates (15 deaths). A striking trend is the rise in cocaine-related deaths, from three in 1981 to 54 in 1989.

### Related National Year 2000 Objectives

- o Reduce drug-related deaths to no more than three per 100,000 people.
- o Reduce drug abuse-related hospital emergency department visits by at least 20 percent.
- o Reduce the proportion of young people who have used alcohol, marijuana, and cocaine in the past month as follows:

Substance/Age	2000 Target
Alcohol/12-17	12.6%
Alcohol/18-20	29.0%
Marijuana/12-17	3.2%
Marijuana/18-25	7.8%
Cocaine/12-17	0.6%
Cocaine/18-25	2.4%

### Data Sources

North Carolina: State Center for Health and Environmental Statistics

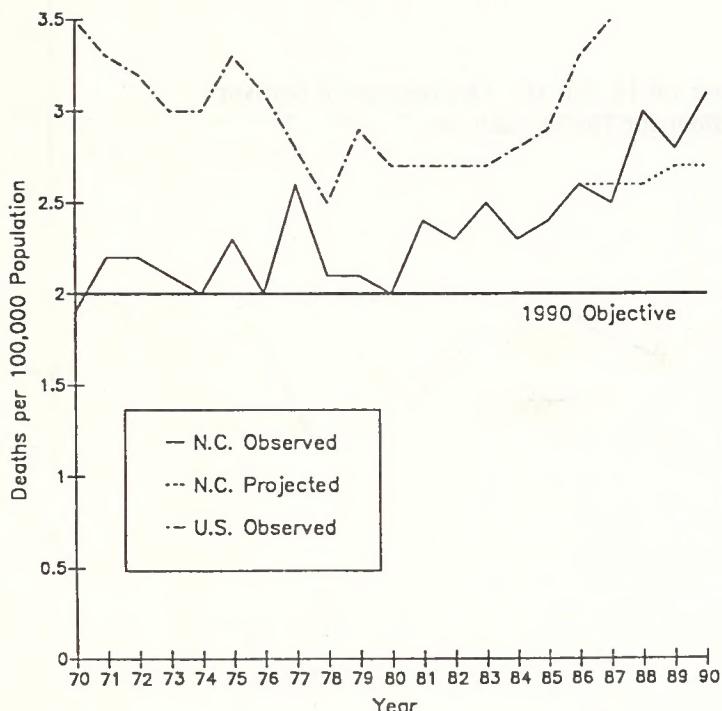
Office of Chief Medical Examiner

United States: National Center for Health Statistics

## DRUG-RELATED DEATH RATES NORTH CAROLINA AND UNITED STATES, 1970-1990

Year	North Carolina	United States
1970	1.9	3.5
1971	2.2	3.3
1972	2.2	3.2
1973	2.1	3.0
1974	2.0	3.0
1975	2.3	3.3
1976	2.0	3.1
1977	2.6	2.8
1978	2.1	2.5
1979	2.1	2.9
1980	2.0	2.7
1981	2.4	2.7
1982	2.3	2.7
1983	2.5	2.7
1984	2.3	2.8
1985	2.4	2.9
1986	2.6	3.3
1987	2.6	3.5
1988	3.0	n.a.
1989	2.8	n.a.
1990	3.1	n.a.

DRUG-RELATED DEATH RATES  
NORTH CAROLINA AND UNITED STATES 1970-1990  
NORTH CAROLINA PROJECTED 1987-1990



## HOMICIDE RATE FOR BLACK MALES 15-24 YEARS OF AGE

### Objective

By 1990, the death rate from homicide among black males 15-24 should be reduced to below 60 per 100,000.

### Explanatory Notes

Includes ICD codes E960-978 of the Ninth Revision. N.C. data for blacks were not tabulated prior to 1979.

### Findings

Although it was projected that both North Carolina and the United States would achieve this objective, death rates have risen faster than expected. North Carolina's homicide rate for young black males has increased 101 percent since 1979. U.S. rates increased 10 percent from 1979 to 1987 (the most recent year detailed data for the U.S. are published).

### Related National Year 2000 Objectives

- o Reduce homicides to no more than 7.2 per 100,000 people.
- o Reduce homicides to children aged three and younger to no more than 3.1 per 100,000 people.
- o Reduce homicides to spouses aged 15-34 to no more than 1.4 per 100,000 people.
- o Reduce homicides to black men aged 15-34 to no more than 72.4 per 100,000 people.
- o Reduce homicides to Hispanic men aged 15-34 to no more than 42.5 per 100,000 people.
- o Reduce homicides to black women aged 15-34 to no more than 16 per 100,000 people.
- o Reduce homicides to American Indians/Alaska Natives in reservation states to no more than 11.3 per 100,000 people.

### Data Sources

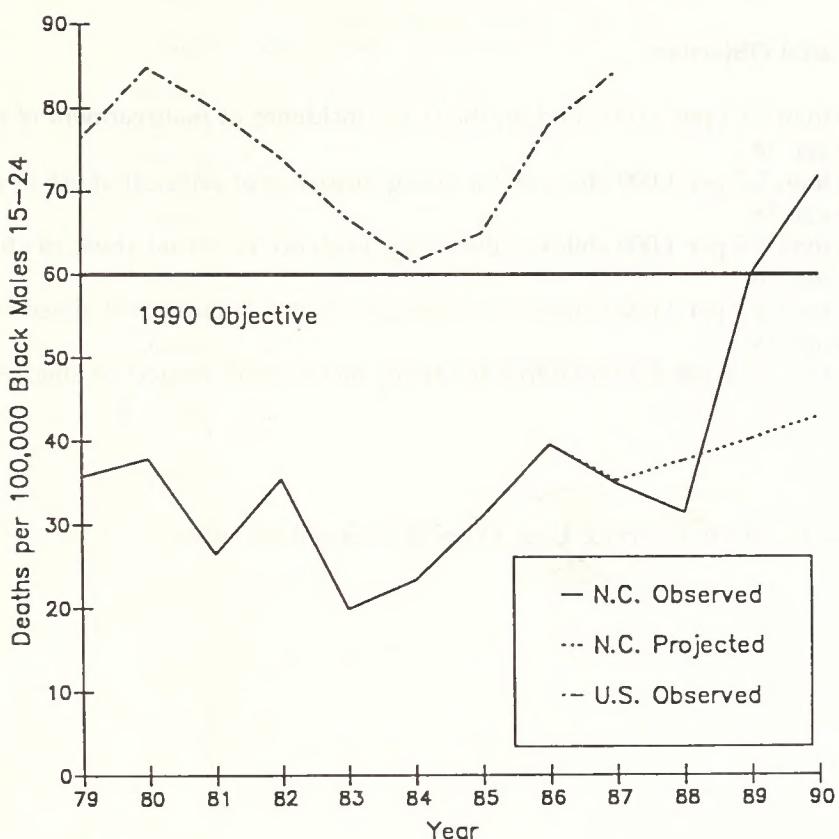
North Carolina: State Center for Health and Environmental Statistics

United States: National Center for Health Statistics

## HOMICIDE RATES FOR BLACK MALES 15-24 YEARS OF AGE NORTH CAROLINA AND UNITED STATES, 1979-1990

Year	North Carolina	United States
1979	35.8	76.4
1980	37.9	84.8
1981	26.5	80.0
1982	35.5	74.1
1983	19.9	66.8
1984	23.3	61.5
1985	31.0	65.0
1986	39.6	77.9
1987	34.9	84.3
1988	31.4	n.a.
1989	60.0	n.a.
1990	71.8	n.a.

### HOMICIDE DEATH RATES FOR BLACK MALES 15-24 NORTH CAROLINA AND UNITED STATES 1979-1990 NORTH CAROLINA PROJECTED 1987-1990



# REPORTED INCIDENCE OF CHILD ABUSE AND NEGLECT

## Objective

By 1990, injuries and deaths to children inflicted by abusing parents should be reduced by at least 25 percent.

## Explanatory Notes

Cases are the number of abused and neglected children (ages 0-17) reported to the N.C. central child abuse registry. A case is confirmed or not confirmed following investigation by the resident county's department of social services. North Carolina's mandatory child abuse reporting law was passed in 1971, but data prior to Fiscal Year 1977 may not be comparable to data reported in FY77 and later. Reported cases do not reflect actual incidence; a national study conducted in 1980 found that only one case in three of child abuse was reported to a child protective agency.<sup>3</sup> National data are not available for this objective.

## Findings

Since FY77, an increase in reported cases of child abuse and neglect was observed in each year except 1982. Confirmed cases also increased every year but one. In recent years, reported cases have increased rapidly. Reported cases rose to 45,617 in 1990, an increase of nearly 1,000 percent since 1977! Confirmed cases increased nearly 900 percent over the same period. About one-third of all reported cases are confirmed.

## Similar National Year 2000 Objectives

- o Reverse to less than 25.2 per 1,000 children the rising incidence of maltreatment of children younger than age 18.
- o Reverse to less than 5.7 per 1,000 children the rising incidence of physical abuse of children younger than age 18.
- o Reverse to less than 2.5 per 1,000 children the rising incidence of sexual abuse of children younger than age 18.
- o Reverse to less than 3.4 per 1,000 children the rising incidence of emotional abuse of children younger than age 18.
- o Reverse to less than 15.9 per 1,000 children the rising incidence of neglect of children younger than age 18.

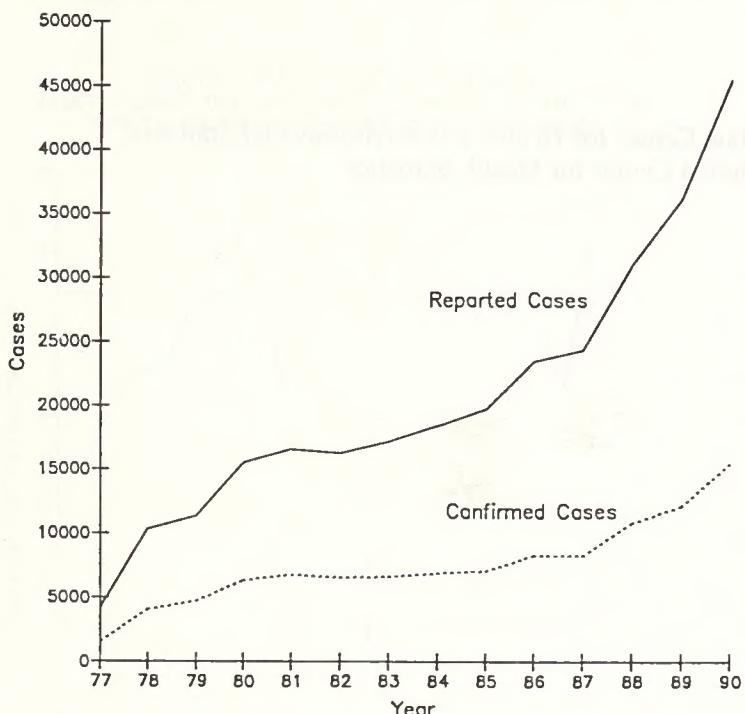
## Data Sources

North Carolina: Child Protective Service Unit, Division of Social Services

## NUMBER OF REPORTED CASES OF CHILD ABUSE AND NEGLECT, NORTH CAROLINA, FISCAL YEARS 1977-1990

Fiscal Year	Reported Cases	Confirmed Cases
1977	4,214	1,565
1978	10,340	4,082
1979	11,352	4,753
1980	15,516	6,365
1981	16,579	6,795
1982	16,276	6,613
1983	17,185	6,688
1984	18,456	6,957
1985	19,786	7,121
1986	23,542	8,301
1987	24,418	8,307
1988	31,097	10,861
1989	36,223	12,141
1990	45,617	15,519

**NUMBER OF REPORTED AND CONFIRMED CASES  
OF CHILD ABUSE AND NEGLECT  
NORTH CAROLINA, FISCAL YEARS 1977-1990**



## **SUICIDE RATE FOR PERSONS 15-24 YEARS OF AGE**

### **Objective**

By 1990, the rate of suicide among people 15 to 24 should be below 11 per 100,000.

### **Explanatory Notes**

Consists of ICD codes E950-959 of both the Eighth and Ninth revisions.

### **Findings**

The state's suicide rate for young people oscillated above and below the objective during the late 1970s up until 1989, when it rose markedly. In the next few years we will be able to ascertain whether or not this "spike" is random variation or the beginning of higher rates more similar to the nation's.

### **Related National Year 2000 Objectives**

- o Reduce suicides to no more than 10.5 per 100,000 people.
- o Reduce suicides among youth aged 15 through 19 to no more than 8.2 per 100,000 people.
- o Reduce suicides among men aged 20 through 34 to no more than 21.4 per 100,000 people.
- o Reduce suicides among white men aged 65 and older to no more than 39.2 per 100,000 people.
- o Reduce suicides among American Indian/Alaska Native men in reservation states to no more than 12.8 per 100,000 people.
- o Reduce to 15 percent the incidence of injurious suicide attempts among adolescents aged 14 through 17.

### **Data Sources**

North Carolina: State Center for Health and Environmental Statistics

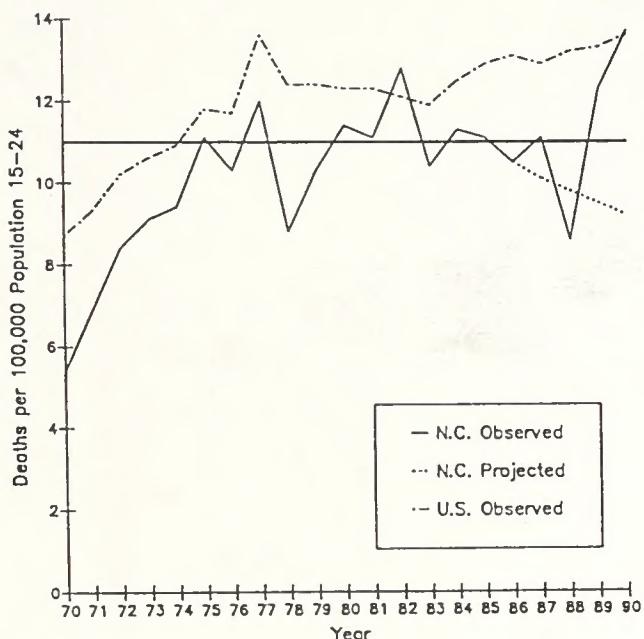
United States: National Center for Health Statistics

## SUICIDE RATES FOR PERSONS 15-24 YEARS OF AGE NORTH CAROLINA AND UNITED STATES, 1970-1990

Year	North Carolina	United States
1970	5.4	8.7
1971	6.9	9.3
1972	8.4	10.2
1973	9.1	10.6
1974	9.4	10.9
1975	11.1	11.8
1976	10.3	11.7
1977	12.0	13.6
1978	8.8	12.4
1979	10.3	12.4
1980	11.4	12.3
1981	11.1	12.3
1982	12.8	12.1
1983	10.4	11.9
1984	11.3	12.5
1985	11.1	12.9
1986	10.5	13.1
1987	11.1	12.9
1988	8.6	13.2
1989	12.3	13.3
1990	13.7	13.6*

\*Provisional data.

### SUICIDE RATES FOR AGES 15-24 NORTH CAROLINA AND UNITED STATES 1970-1990 NORTH CAROLINA PROJECTED 1987-1990



## REFERENCES

- <sup>1</sup>U.S. Department of Health and Human Services, Public Health Service. *Healthy People: The Surgeon General's Report on Health Promotion and Disease Prevention*. Washington, D.C., 1979.
- <sup>2</sup>U.S. Department of Health and Human Services, Public Health Service. *Promoting Health/Preventing Disease: Objectives for the Nation*. U.S. Government Printing Office, Washington, D.C., Fall 1980.
- <sup>3</sup>U.S. Department of Health and Human Services, Public Health Service. *The 1990 Health Objectives for the Nation: A Midcourse Review*. Washington, D.C., November 1986.
- <sup>4</sup>Surles, Kathryn B. and Kathryn P. Blue. "1990 Health Objectives for the Nation: The North Carolina Course" *SCHS Studies*. Raleigh, N.C., February 1988.
- <sup>5</sup>U.S. Department of Health and Human Services, Public Health Service. *Healthy People 2000, National Health Promotion and Disease Prevention Objectives, Full Report, with Commentary*. U.S. Government Printing Office, Washington, D.C., September 1990.
- <sup>6</sup>U.S. Department of Health, Education and Welfare, Public Health Service, National Center for Health Statistics. *Eighth Revision International Classification of Diseases, Adapted for Use in the United States*. PHS Number 1693. U.S. Government Printing Office, Washington, D.C., December 1968.
- <sup>7</sup>World Health Organization. *International Classification of Diseases (Ninth Revision)*. Geneva, 1977.

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